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ABSTRACT

This companion volume to the final report of a needs assessment survey for bilingual education contains information on data collection procedures as well as a comprehensive tabulation of statistical data. The information covers distribution of sample, response rate, data encoding procedure, breakdown into components of programs studied, descriptive and school characteristics of respondents, frequency of program types and types of instruction, staff by time in home language and English instruction, file documentation, and tape specification. (JB)

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ED193972

CHILDREN'S ENGLISH AND SERVICES STUDY

Technical Report on Collection and Analysis of Pupil Survey Responses

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August 10, 1979

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FL011964

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1. Preparation for Follow-Up

1.1 1978 Efforts

The 1978 efforts to collect Pupil Survey (PS) data are described in both the RDI Field Report (Volume II, Appendix 6.5, January 31, 1979) and the Lourdes Miranda and Associates (LM&A) report (Volume II, February, 1979). Basically, the following steps were taken: 1) a Parental Consent Form was signed by the parent approving release of school data for each child; 2) a 1978 PS form was sent to the child's school if the school had agreed to participate in the study; and 3) children with returned questionnaires were identified as complete cases and cases without completed PS forms were assigned one of five other disposition codes. Due to the closing of many schools at the end of the 1978 household survey effort, the PS response rate was too low to do the requested PS analyses. The 1979 effort was designed to obtain forms from the schools of the 1978 non-respondents.

There were 2,953 5 to 18 year old children in the sample for whom PS data could be considered. Of these, about 2,300 had signed Parental Consent Forms and were eligible to participate in the PS phase of the study. Approximately 1,100 complete PS survey responses were obtained in 1978. The remaining 1,200 cases, then, were of interest in the 1979 follow-up mailing.

The National Institute of Education (NIE) decided to do a second mailing to 5 to 14 year old children with completed Language Measure and Assessment Inventory (LM&AI) tests because only these cases had the LESA/nonLESA criterion necessary for the PS analyses. Of the 1,909 5 to 14 year olds, about 800 had completed 1978 PS forms leaving approximately 1,100 for the 1979 effort.

1.2 Texas and California Respondents

RDI provided information needed for the 1979 follow-up to California and Texas children. The identification numbers of all selected 5 to 14 year old children were computer listed by PS disposition code category within each school district. The listing of cases provided LM&A with a master list of children and their status as of 1978. A total of 310 cases were listed in California and 460 in Texas. Of these, approximately 224 and 403, respectively, were eligible to receive follow-up questionnaires.

A packet of information was prepared for each school district. RDI provided the child's name, school, school address, age, language group, and parental consent form for each child that did not have a completed 1978 PS form. The information for children from the same school district was grouped together to facilitate LM&A's mailing to the schools. Also enclosed was any record RDI had of correspondence with school representatives. Information included names of contacts or administrative personnel and records of conversations about participation in the 1978 study. LM&A, therefore, had a complete record of RDI's 1978 activities in soliciting school district participation.

NIE requested two special listings of California schools to use in obtaining California cooperation. The first was a list of California contact persons. RDI used records of telephone and correspondence contacts from 1978 to identify at least one contact person in each school where a contact had been made. Where no contact was made in 1978, RDI provided names and addresses of superintendents and campus principals from a California State Education Agency directory of California schools.

The other special listing was for the Los Angeles Unified School District. RDI identified all of the 5 to 14 year old children without completed PS forms by campus in Los Angeles Unified School District. RDI provided a list of children attending each school and the name and address of the school. Twenty-one campuses and 51 potential 1979 respondents were identified and sent to LM&A for use in the California effort. The material on Texas and California children was provided by the end of the second week of the follow-up contract so that LM&A could prepare the 1979 mailing.

1.3 New York and the Remainder of the U.S. Respondents

Westat had responsibility for the 1978 data collection effort in all states other than Texas and California. LM&A obtained Westat's 1978 PS mailing records, but RDI was responsible for an accurate list of New York and the Remainder of the United States non-respondents from the computer data files.

RDI prepared a computer list of all 5 to 14 year old children with completed LM&AI tests and without completed 1978 PS forms found on the master data file of selected children. RDI provided LM&A the identification numbers of these children, their ages, language groups, and other selected information thought to be useful in identifying them in the Westat data collection records. Children were listed by PS disposition code within each state. State totals were provided.

RDI also responded to LM&A requests for additional information on New York and the Remainder of the U.S. children. Since RDI maintained all completed household questionnaire packets, RDI was able to check responses to school related questions for cases where inconsistent records caused confusion. During the mailing period, school names and addresses were checked upon LM&A's request to clarify 1979 mailing procedures for New York and the Remainder of the U.S.

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* Note that these numbers were obtained prior to final data editing.

1.4 RDI Questionnaire Revision Recommendations

The PS questions were reworded to make the 1978 and 1979 data comparable. Because the questionnaire had to be revised, RDI suggested insertions to make data entry easier. Three basic changes were made. First, record and column numbers were added to the end of each page to guide the keypunch operator in determining correct column numbers. Secondly, blanks were provided for editors to use in coding open-ended items where more than one response was permitted. Finally, the number associated with each response to each item was made a one-digit number for one column fields and a two-digit number for two column fields. LM&A included these revisions when reprinting 1979 forms.

1.5 Generation of Identification Number Labels

During the 1978 data collection effort, RDI found that almost all errors in matching forms for a child reflected clerical errors in transcribing a unique identification number for the child onto each form. Numbers were not clearly written or digits were inverted requiring considerable editing time to identify appropriate forms for each child.

At the time of the 1979 mailing, RDI had an accurate data file of identification numbers to which PS forms would be matched. To facilitate the matching and reduce editing, RDI produced a label (similar in size to an address label) containing the identification number of each child eligible to receive a 1979 PS form. The numbers were printed by computer from the master data file. RDI provided three copies of each label to LM&A for California, Texas, New York and the Remainder of the U.S. children. LM&A attached a label to each 1979 PS form before mailing. A few errors resulted from attaching the wrong label to a child's form, but the procedure virtually eliminated the problem of matching 1979 PS forms to cases on the data file.

2. Follow-up Procedures

2.1 Results of Spring, 1978, Data Collection

Administration of the Screening Questionnaire (SQ), the Household Questionnaire (HQ) and the Language Measurement and Assessment Inventory (LM&AI) was completed in 1978. On the basis of these three instruments, a total sample of 1,909 children, ages 5 through 14, was defined.*

The final phase of data collection used the pupil Survey Questionnaire (PSQ) to obtain information from the school attended by each child in the sample. Since PSQ information is school-based rather than home-based, three difficulties arose with this phase of the study. First, it was necessary to obtain a parent consent form (PCF) from each family authorizing the school to release the necessary information. Second, cooperation had to be obtained from each school; this was a difficult process, since different states chose different procedures for obtaining cooperation. Third, once cooperation was obtained, and a copy of the PCF together with a blank PSQ mailed to the school, it was still necessary to wait until the appropriate school staff found time to complete the PSQ and mail it back to LM&A.

Since the process was time-consuming, and could not even begin until near completion of the HQ Phases, the Spring, 1978, PSQ effort was not completely successful; specifically, data collection was interrupted in some parts of the country by the closing of schools for the summer.

In an attempt to classify and count students by PSQ status, a series of three codes was devised. The first of these was the PCF code, shown in Table 1.

Table 1. PCF Codes

PCF Code	
Code	Category
1	Signed
2	Refused
3	Not Enrolled or Not Eligible

* The distribution, by geographical area, language and age of this sample may be found on page 23, Volume II, CESS Final Report (LM&A, Feb. 1979).

With regard to Code 3, it is obvious that no school data can be obtained for a child who is not enrolled in school. The "Not Eligible" classification generally refers to children who were determined to be outside the 5-14 age range.

The second code represents the status of the school district. It is defined in the following way:

Table 2. PS Codes

PS Code	
Code	Category
1	Participating District; PSQ Returned
2	Participating District; PSQ Not Returned
3	Non-Participating District
4	Correct School Address and/or Name Could Not be Found; Complete Form Not Obtained for Undetermined Reason

From these two codes, a third code, denoting Pupil Survey Disposition, was derived. The PSD Codes are given in Table 3.

Table 3. PSD Codes

		PSD Code	
PCF Code	PS Code	Code	Category
1	1	1	Completed, Omit
1	2	2	Mail Again
1	3	3	Mail Again
1	4	4	Mail Again
2	-	5	Omit
3	-	6	Omit, or Check if in School This Year

At the cut-off date for 1978 data collection, there were 1,909 cases in the PSQ sample; the joint distribution of these cases, by subsample and by PSD code, is shown in Table 4.

Table 4. Initial Distribution of PSQ Sample by Sub-Sample and PSD Code

	PSD Code			
Sub-Sample	1	2,3,4	5,6	TOTAL
California	64	224	22	310
Texas	33	403	24	460
New York	137	126	16	279
Balance	519	310	31	860

Since cooperation was to be sought from previously non-cooperating districts, Codes 2 , 3 and 4 were administratively equivalent, and are combined. Similarly, Codes 5 and 6 both represent cases that cannot be followed up (with the exception mentioned below), and are therefore combined.

For California and Texas, no changes in PSD coding were necessary; the above figures represent the state of affairs at the close of the Spring, 1978 data collection effort. For New York and the balance, the figures were revised to reflect changes that occurred after the cut-off date for data collection. Records for all subjects coded "2", "3" or "4" on the print-out were examined. Those for whom PSQ's had been received after the cut-off date were recoded "1". Those which, for a variety of reasons, could not be followed up were recoded "5". The remainder were coded "2", the generic code indicating that follow-up should be attempted if district cooperation is obtained. Codes "5" and "6" were assigned the generic code of "5", except for two children in Florida, who were recoded as "2" because their records indicated that it would be possible to obtain school information for them. The resulting PSD code distribution is shown below:

Table 5. Final Distribution of PSQ Sample by Sub-Sample and PSD Code

	PSD Code			
Sub-Sample	1	2	5	TOTAL
California	64	224	22	310
Texas	33	403	24	460
New York	152	97	30	279
Balance	588	214	58	860

Thus, the response rates on the Pupil Survey Questionnaire at the close of the Spring, 1978, data collection effort were 20.6% in California, 7.2% in Texas, 54.5% in New York, and 68.4% in the Balance.

2.2. Overview of 1979 Data Collection

The Spring, 1979, data collection effort was undertaken as a follow-up of students for whom no school-based data were obtained in 1978. This effort was part of the larger scope of work, which also included the subsequent analysis of the school-based data, which is presented in this report, and the MELP analysis, which has previously been presented in a separate report.

Since a year had elapsed, two preliminary tasks were necessary before data collection could proceed. First, cooperation had to be obtained, or re-obtained, from states having students in the follow-up sample. Second, the questionnaire had to be revised to reflect the fact that retrospective, rather than current, data were being asked for.

The data collection task involved components. First, it was necessary to determine what students were in the mailing sample. A student was in this sample if all the following conditions were met:

a) 5-14 years of age;
b) PCF signed and returned to school;
c) completed LM&AI;
d) school system currently cooperating.

Next, the actual mailing took place. Third, follow-up telephone calls were made as needed. Finally, returned questionnaires were logged in, edited, and, if completed, mailed to RDI for processing.

2.3 School Cooperation

Arrangements in individual states were made on a case-by-case basis through the State Education Agency (SEA) coordinator. L. Miranda and Associates provided a list of contact persons in each SEA from the spring 1978 survey; however, not everyone in the list was the person ultimately contacted by NIE. A letter was sent out by the CESS Project Officer to each state coordinator.

Separate arrangements were required for the states of California and Texas. The SEA for California provided NIE with a list of the school districts which in the Spring, 1978, survey had not had not refused to be recontacted for the follow-up survey. These school districts were contacted by LM&A to confirm their participation. All nineteen of the school districts in California eventually agreed to participate.

In Texas, the SEA agreed to permit the follow-up at the option of the LEA. The SEA sent a memo to the school districts which had not refused in the Spring, 1978, survey, enclosing a return address postcard on which the LEAs indicated their willingness to cooperate. The SEA permitted no LM&A contact with the LEAs unless a district had returned the card. One school district participated in the follow-up.

In New York, the SEA agreed to send a memo to districts enrolling target children as they had done in the spring of 1978. This resulted in questionnaires being sent directly to the schools, rather than to the district. For Illinois, school district participation was secured by NIE for the follow-up and questionnaires were mailed directly to the schools enrolling target children. Questionnaires for the balance of the United States were sent to the state coordinators.

2.4 Questionnaire Adaptation

The Pupil Survey Questionnaire was adapted to provide information retrospective to the 1977-78 school year. This involved rephrasing some questions and statements in the questionnaire.

The work statement called for printing 1,100 Pupil Survey Quesionnaires (PSQ), a figure derived from the number of non-responses in participating districts (N=66) and in non-participating distrcits (N=897) for children ages 5-14 with valid test scores and signed parent consent forms.

The number of questionnaires printed was subsequently increased to 1,600, after obtaining approval from the project officer. The printing of 500 more questionnaires proved to be a wise decision as remailing became necessary for various schools and school districts which indicated they did not receive questionnaires from the first mailing.

2.5 Questionnaire Mailing and Follow-up

Some PSQ's mailed out for the original spring 1978 survey were received after the cut-off date, and data from them were therefore not incorporated into the original 1978 results. Responses from some 200 such late returned PSQ's were retrieved from WESTAT files by LM&A. These were then cross-checked against the RDI computer list of respondents to eliminate any possible double-counting. All additional PSQ's thus identified, which had effectively been excluded from the original survey analysis because they were returned late, were added to the Pupil Survey Data File. In order to follow up the remaining unreturned PSQ's, LM&A identified from the WESTAT logs and files and the RDI print-out all the students in the various participating districts from whom no completed PSQ's had been received in the spring 1978 survey. Reprinted PSQ's were mailed out to these non-respondent children through their schools and school districts. Telephone follow-ups were made to all the schools in New York and almost all of the schools in the balance of the U.S. to increase the response rate. The first follow-up call was generally made two weeks after the mailing, with a second call one week after the first. In many cases, three or four calls were made due to problems in identifying or reaching the proper person.

It is not possible to identify the exact number of PSQ's that were completed and returned as a result of telephone follow-up. We estimate, though, that at least one-third of the completed questionnaires are attributable to telephone follow-up.

2.6 Problems Encountered

A number of problems were encountered during the follow-up data collection, some anticipated and some not. The major problems are listed below, along with, when applicable, their resolutions.

1) Some school and districts claimed to never have received the questionnaires. We believe that this was discovered in all cases, by telephone call, and remedied by a second mailing.

2) Some schools claimed they were too busy to complete the questionnaires. Explanation and persuasion remedied this at some schools, but not at others. The timing of the study was involved in this problem; despite early mailings, delays in receipt of questionniares and delays caused by other factors at the schools led to questionnaire completion (or non-completion) at the end of the school semester, when many other tasks seemed more pressing.

3) Some children had dropped out of school or moved to another district. In most of such cases, their records went with them, and the new districts were not participating in the study. This situation could not be remedied. A related problem, in California, was that some study children were from migrant families and their records could not be traced.

4) Administrative problems were encountered in four states: Louisiana, New York, Connecticut and California. The state coordinator for Louisiana left the SEA during the follow-up survey and no one was assigned to replace him. LM&A, however, only learned of this shortly before Louisiana schools were about to go into summer recess. As a result, the response rate of the follow up survey in Louisiana was zero. In New York, a few schools insisted on getting their superintendents' clearance to administer the reprinted PSQ's. In such cases, however, a call to the superintendent remedied the situation. In Connecticut, the state coordinator insisted that clearance should be sent from Washington for the administering of the follow-up, even though it was explained to them that a letter asking for their cooperation had been sent to them by NIE. Although this situation seemed to be resolved, the response rate from Connecticut was low. Problems arose in one large district due to a real or imagined breach of protocol: LM&A was apparently communicating with the wrong person. This was resolved, but response from this district was moderate.

2.7 PSQ Response Rates

As a result of Task 1, the obtaining of school cooperation, complete cooperation was given by New York and the Balance, and partial cooperation by California. These three sub-samples were then included in the follow-up. Cooperation was minimal in Texas, and Texas was deleted from the remainder of the study.

Table 6 shows the total sample sizes, based on all PSD codes (1, 2 or 5), for California, New York and the Balance. Column two gives the number of PSQ's returned in 1978, and column three shows the number of PSQ's necessary for an overall response rate of 65%; this number is arbitrary, but represents best professional judgment as to the minimum response rate necessary for accurate estimation. Column four contains the difference between columns two and three and therefore represents the target number of questionnaires to be completed and returned in 1979.

Table 6.
Completed PSQs Required for 65% Response Rate

	PSQ Sample Sizes			
	Total Sample	Returned in 1978	Necessary for 65%	Necessary in 1979
California	310	64	201	137
New York	279	152	181	29
Balance	860	588	559	--

Thus, 137 additional completed PSQ's were necessary from California, and only 29 from New York. In the Balance of the country, the 65% response rate had already been reached.

Table 7 shows the maximum theoretical number of additional PSQ's that could be obtained; this is the number of Code 2's shown in Table 5. The second column gives the number of PSQ's actually mailed, which is actually smaller in all cases. The shrinkage in California is due to non-cooperation, while the shrinkage in New York and the Balance results from missing records: 19 in New York and 17 in the Balance. Column three shows the number of additional PSQ's necessary for an overall response rate of 65%, and column four expresses this number as a percentage of column two.

Table 7.
Response Rate Required for 65% Overall Response Rate

	Additional PSQ's			
	Maximum	Mailed	Necessary	Nec./Mailed
California	224	179	137	77%
New York	97	78	29	37%
Balance	214	197	--	--

Thus, to meet the target response rate in California, it would have been necessary to obtain a current response rate of 77%. In New York, the corresponding figure was 37%. Although all districts in all three subsamples were followed-up in a similar manner, LM&A concentrated its efforts of California and New York, in an attempt to reach the desired minimum response rates.

The actual response rates are shown in Table 8, in terms of completed questionnaires received:

Table 8.
Response Rate Based on Completed PSQs Received

	PSQ's Mailed	PSQ's Returned Completed	
		Number	Percentage
California	179	49	27%
New York	78	28	36%
Balance	197	74	38%

It can be seen that the lowest response rate was obtained in California, where the highest response rate was needed. LEA cooperation in California in the follow-up was expected to increase due to NIE efforts to secure increased cooperation at the SEA level. The SEA volunteered in the follow-up to call each LEA in the sample and to provide an extensive list of individual contacts in LEAs, in addition to mailing a supportive letter, as they had done previously in 1978. In spite of strong SEA cooperation, however, requests to avoid overlap with a state data collection effort delayed the CESS mailout. The response rate in 1978 was highest in the balance, and this situation was maintained in 1979.

The next table shows the final computed response rate for each of the three sub-samples. Since both numerators and denominators exhibit some discrepancies when compared with earlier tables, an explanation is in order here. First, the sample sizes are smaller than indicated previously: 301, 274 and 828, as compared with 310, 279 and 860 shown in Table 5. This resulted from the decision to retain the separate PSD codes of 5 and 6, rather than to combine them into a generic code of 5, and to delete 6's from the response rate calculation. This is based on the fact that cases coded 5 could theoretically have yielded school-based information (had parents chosen to sign the PCF), while cases coded 6 could not theoretically have yielded this information. Thus, 9 cases in California, 5 in New York and 22 in the Balance were considered as not being in the PSQ sample.

Table 9.
Adjusted Response Rate Based on Data Entry

	Sample Size	Completed PSQ's	
		Number	Percentage
California	301	114	37.9%
New York	274	175	63.9%
Balance	828	655	79.1%

The changes in the numerators are small but troublesome. Table 5 indicates that 64 PSQ's were returned from California in 1978, and Table 8 shows an additional 49 in 1979, for an overall total of 113. The total of 114 in Table 9 is greater by one, suggesting that either an undercount was made in 1978, or an additional completed PSQ was returned and transmitted, but not recorded properly in 1979.

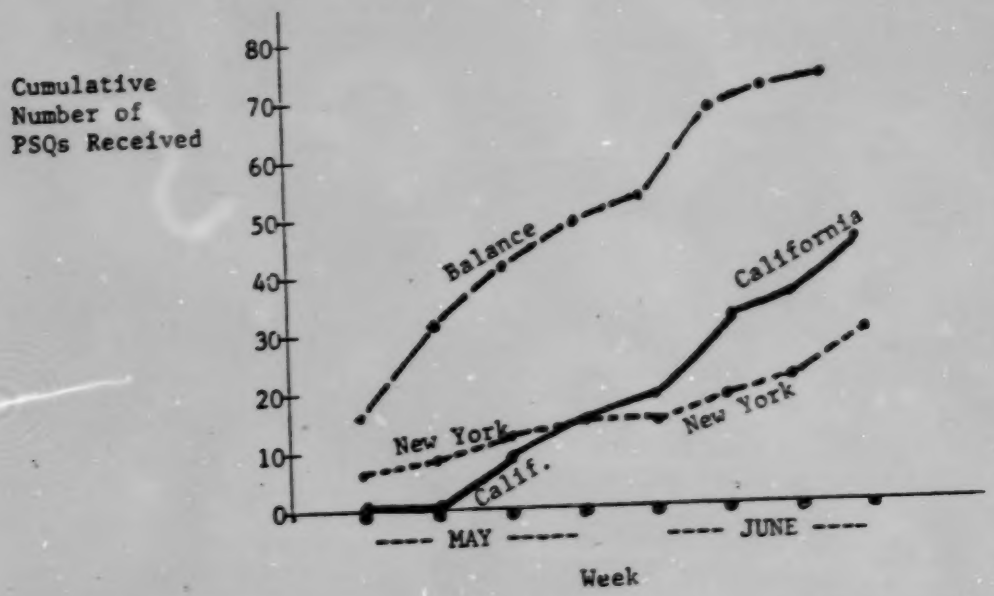
The reverse problem exists in New York and in the Balance. In New York, Tables 5 and 8 indicate 152 and 28 completed questionnaires in 1978 and 1979, respectively, while Table 9 shows a total of 175, a deficit of 5. It is known that a few duplicate questionnaires were received during the course of the study and this accounts for some of the discrepancy. The other possibility is that improper ID information made it impossible to merge PSQ data with existing data. The situation in the Balance is similar, with the total number of completed PSQ's being less than Tables 5 and 8 would suggest.

Table 10 shows the number of completed PSQ's received as a function of time, based on weekly summary sheets. The same information is presented graphically in Figure 1. Although saturation may have been attained in the Balance, both California and New York were returning questionnaires at a fairly high rate up to the revised cut-off date of June 25. This suggests that final response rates might have been significantly higher had the time frame of the follow-up been different. The cut-off date could not have been extended further, not only because of contractual completion dates, but also because of school closings in June. It would, of course, have been beneficial to have initiated the follow-up activities a month or two earlier in the school year.

Table 10.
Completed PSQs Received by Week

DATE	Compiled PSQ's Received		
	California	New York	Balance
May 5	0	6	16
May 12	0	9	31
May 21	10	13	43
May 29	16	16	50
June 5	20	16	55
June 11	35	19	70
June 20	40	22	73
June 25	49	28	74

Figure 1.
Completed PSQs Received by Week



All of the above information is in terms of completed questionnaires. It may also be of interest to consider questionnaires that were returned in incomplete form. (There is no difficulty in defining "complete" and "incomplete", since all questionnaires that were returned were either virtually complete or had almost no information.) Of the incomplete questionnaires, very few indicated a non-cooperative attitude; almost all were incomplete because of data being unavailable. Therefore, incomplete PSQ's, while of no value in terms of data analysis, do indicate some degree of cooperation and responsiveness.

The total number of incomplete PSQ's received was 35; 23 of these were from California, 6 from New York and 6 from the Balance. In terms of percentages, 32% of the questionnaires received from California were incomplete. Had these been completed, the current response rate for California would be 40%, rather than 27%. In New York, 18% of the questionnaires received were incomplete, and this reduced the current response rate from a potential value of 44% to the observed value of 36%. In the Balance, incomplete questionnaires accounted for only 7.5% of total questionnaires received, and the effect on current response rate is minimal.

Finally, it may be of interest to note the response rates for individual states in the Balance of the country. These are shown below, with states ranked in order of decreasing number of questionnaires mailed out. While the data are insufficient for drawing conclusions, there is evidence that responses were more difficult to obtain from states with fewer children in the sample (and, presumably, with fewer NELB children enrolled in the schools). The overall response rate from the ten states with fewer than ten PSQ's mailed is 17%; for the five states with over 10 PSQ's apiece, the rate is 44%.

Table 11.
Response Rate by State for the Balance

State	PSQ's Mailed	PSQ's Returned Completed	
		Number	Percentage
New Mexico	53	15	28%
Illinois	36	19	53%
Florida	26	12	46%
New Jersey	24	11	46%
Arizona	11	9	82%
Louisiana	8	0	0%
Massachusetts	8	3	38%
Connecticut	7	2	29%
Pennsylvania	6	2	33%
Hawaii	5	0	0%
Maine	5	0	0%
Indiana	3	1	33%
Colorado	2	0	0%
Georgia	2	0	0%
Mississippi	1	0	0%

3. Data Preparation and Entry

3.1 Editing and Coding of Item Responses

In 1978, RDI edited the completed PS forms before entry to computer. Many of the items were open-ended, where respondents provided information not previously coded. To develop a coding system, RDI selected the first 100 1978 forms and had editors record all comments to open-ended items. Codes were then assigned to the most frequent responses. Others were grouped into a "general other" category. On items where more than one answer was possible, RDI determined a likely maximum and allowed columns up to this limit.

The developed codes were assembled into coding books. The editors were allowed to add codes, up to the maximum for each item. A coordinating editor ensured that each new code was added to all code books to maintain consistency among editors.

Because the item responses were the same in 1978 and 1979, the RDI project director reviewed the coding system with LM&A editors for use with the 1979 responses. The method of marking the forms was reviewed and the editors practiced interpreting the items. The meanings of the codes were discussed and agreed upon. Finally, RDI reviewed the PS data map with the LM&A editors. The data map showed the column and record number of every item, the number of columns allowed, and the number of multiple responses allowed per item.

To ensure consistency, the RDI project director was available during the data collection period and answered questions about coding. The LM&A editors called whenever a problem or concern arose and all parties agreed on the appropriate codes. To check the editing before keypunching, the RDI project director reviewed all of the forms sent from LM&A. Due to the training and telephone coordination, only minor changes were needed on very few forms before keypunching. The final set of codes may be found in section 6, PS File Documentation.

3.2 Updating PS Disposition Codes

In 1978, RDI and Westat developed a set of disposition codes to indicate the outcome of the PS effort for each child. The codes and their meanings are presented in Table 12. The codes reflect the three conditions necessary to obtain a completed form: 1) if the parent agreed to release the child's school records, 2) if the school agreed to participate in the study, and 3) if the child was enrolled and had appropriate records needed to complete the questionnaire.

Table 12. Pupil Survey Disposition Code Categories

Code	Category	Category, Definition	Outcome
1	Completed PS	Completed PS form returned	Complete
2	Participating district, PS not returned	School district agreed to participate in the study in 1978 but did not return a form in 1978 or 1979	Incomplete
3	Non-participating district	School district refused to participate in the study in 1978 and did not return a form in 1979 when contacted	Incomplete
4	Undetermined non-response	Correct school address and/or name could not be found; complete form not obtained for undetermined reason	Incomplete
5	Refused PCF	The child's parent refused to sign a Parental Consent Form to release school records	Incomplete
6	Child not enrolled in school	Child was not in school; child was handicapped, dropped out, too young, etc.	Ineligible

RDI assigned disposition codes to the Texas and California 1978 respondents. Westat assigned codes to respondents from the other states and provided these to RDI. The codes were not edited until 1979 when the follow-up was completed. After the 1979 completed cases were added to the 1978 file, the file was updated to change the 1978 code to be a 1, completed, for all cases where a completed 1979 form was obtained.

Editing of the disposition codes included verification of the ineligible, code 6, children. In discussions with Westat about the PS non-response weight adjustment, it was noted that children not enrolled in school in the spring of 1978 were not members of the population. They should also be excluded from the sample.

RDI and Westat identified cases as ineligible on the basis of responses to the Household Questionnaire or from the school on an incompleted, returned PS. RDI checked for consistency between the codes and the household survey item H-1: "Is (target child) enrolled or attending school now?" Any case with an H-1 response of "no" and a PS code other than 6 was investigated. Sixteen cases were found. Each child's Household Questionnaire was reviewed and all 16 received disposition codes of 6. The Household Questionnaires indicated that these children had been suspended, had quit school to work, or were attending only daycare or prekindergarten programs.

Other editing of the disposition codes resulted in changing five cases from the Westat group to code 4. RDI was supposed to have received completed 1978 forms but none could be found. Two cases with code 1 were changed to code 3 after their school decided it was too late in the year to participate and subsequently refused to return forms. Four PS surveys overlooked during the 1978 data entry phase were entered for cases showing completed codes. These editing tasks were done for both the 1978 and 1979 entries after RDI received all completed forms.

3.3 Keypunching and Verification

RDI used Texas Instruments' 770 intelligent terminals to enter the approximately 1,100 1978 PS questionnaires. The terminals were programmable such that the entry clerk could follow a provided format. The terminals greatly facilitated data entry since fields could be limited to specified digits and a double-entry could be required for particularly important fields (i.e., identification numbers). Data entry was not verified in the traditional sense as with punched cards where no format guides or character limits are available.

Because Texas refused to significantly participate in the 1979 follow-up study and California delayed its cooperation, RDI decided to enter the 1979 responses through the use of punched cards. The cost of entry with the TI770 terminals could not be justified for less than 300 respondents. The forms received in 1979 then were keypunched on cards and verified by being punched a second time. Keypunch operators experienced in survey work were employed with very satisfactory results.

To check the data entry accuracy of the 1978 and 1979 data, ten cases were randomly selected from the list of completed PS forms. Three cases were from 1978 and entered via the TI770s; three were from 1978 but entered via punched cards; and four cases were from 1979 and entered via punched cards. All entries were checked for characters and column position against the actual PS forms. No errors were found in any of the three groups. Entering the responses from cards did not affect the quality of the data.

3.4 Matching PS Responses to Other Survey Information

RDI developed computer programs to match PS cases with those existing on the master file of selected children. Using the PS disposition code as an indicator

of the appropriate outcome, inconsistencies were identified. These included cases where: 1) more than one PS existed for the same child; 2) the disposition code indicated a completed PS and no PS was found under that identification number on the PS file; 3) the PS had an identification number that did not match any master file record. Approximately 50 cases needed editing before an accurate match could be made.

About half of the problems resulted from incorrect person numbers on the PS file. Almost all were from 1978 forms where 1) a block to write in person number was not provided and these numbers had to be added later and 2) identification labels were not used. The duplicate PS forms on the computer file resulted from entry of the same form twice. The remaining errors were corrected when the disposition codes were edited (as discussed in the previous section).

Upon completion of editing of the PS data file, the matching program was rerun. No errors were found. All cases with a completed PS disposition code were matched to PS records and all person numbers were corrected to match to the master file.

To preserve which form was obtained, a code for "year" was added to the file indicating whether the survey was obtained in 1978 or 1979. The only other task suggested by NIE in merging the PS data with existing records was to compare the child's age with his grade level and determine if the grade level was within expectation. This was not done because no acceptable operational definition of appropriate grade level could be determined without reviewing each child's household survey information. Possible age and grade level differences between the two merged files were not resolved.

3.5 Results of Data Collection by Disposition Code Category

Table 13 indicates the number of PS forms obtained in each of the study's four subpopulations, California, Texas, New York, and the Remainder of the U.S. Only responses from 5 to 14 year old children with completed LM&AI tests are shown because only these cases were considered in the PS analyses phase of the project. The 989 completed forms for 5 to 14 year olds are among the total of 1,347 completed forms received for all 5 to 18 year old children regardless of LM&AI test outcome or age.

The response rates among 5 to 14 year old children with LM&AI tests are shown in Table 14 for each subpopulation. Note that the code 6 cases were omitted in computing the response rates. These children were not enrolled in school and were not considered part of the population. The delay in mailing out questionnaires to avoid overlap with a state data collection effort, and the lack of LEA cooperation in spite of strong state support, largely seemed to account for the low 37.9% response from California. In some LEAs, cooperation was promised over the telephone, but questionnaires were never received at LM&A. The lack of cooperation from Texas LEAs resulted in such a low return (10.2%) that Texas had to be excluded from all PS analyses planning. The completion rates in New York (63.9%) and the remainder of the U.S. (79.1%) were sufficient for PS analyses. A rate of 65% was used as a rule of thumb determinant.

Table 13. Pupil Survey Disposition Codes by Subpopulation for 5-14 Year Olds*

Code	Category	California	Texas	New York	Remainder of U.S.	Total
1	Completed PS: 1978	63	36	149	587	835
	1979	51	9	26	68	154
	Total	114	45	175	655	989
2	Participating, PS not returned	65	43	11	18	137
3	Non-participating	107	346	75	145	673
4	Undetermined non-response	0	0	1	2	3
5	Refused PCF	15	6	12	8	41
6	Child not enrolled in school	9	20	5	32	66
TOTAL		310	460	279	860	1909

* Based only on cases with completed LM&AI tests because only these children had LESA/nonLESA codes.

Table 14. Pupil Survey Response Rates by Subpopulation for 5-14 Year Olds*

Response Rate Components	California	Texas	New York	Remainder of U.S.	Total
Total Completed PSs (Code 1)	114	45	175	655	989
Total Possible PSs (Codes 1, 2, 3, 4, 5)	301	440	274	828	1843
PS Response Rate	37.9%	10.2%	63.9%	79.1%	53.7%

* Based only on cases with completed LM&AI tests.

4. Analysis Preparation

4.1 Pupil Survey Analysis Plan

4.1.1 NIE Recommendations

Comments on the use of PS questionnaire information were solicited by NIE from several consultants and project reviewers. A total of nine recommendations resulted from the final meeting held in the Spring, 1979. Five of these were included in the PS follow-up contract. NIE and RDI developed an analysis plan to address the recommendations with PS responses. The following is an overview of the recommendations and an examination of how the PS responses were treated to operationally define the concepts in the analysis design. The purpose of each recommendation is discussed in more detail in the following section where the results of the analyses are presented.

Recommendation 1: Description of the Data Base

The first recommendation was to examine all of the survey item responses for both LESA and nonLESA children. Of interest were the similarities and differences in the item responses. Crosstabulations were planned for each item by LESA/nonLESA. In addition, all items were examined for two age groups (5 to 8 year olds and 9 to 14 year olds) and for two language groups (Spanish and Other non-English language) within the LESA/nonLESA categories. Both weighted and unweighted tables were requested by NIE. The weighted tables would provide a description of the survey respondents representative of all 5 to 14 year old NELB children in each subpopulation.

Note that all of the PS analyses were to be done only on 5 to 14 year old children with completed LF&AI tests and completed PS forms. Tables could be provided for only two subpopulations, New York and the Remainder of the U.S. Entire U.S. estimates could not be done without the participation of Texas and California. Some tables were obtained on the California respondents and provided to NIE under a separate technical report.

Recommendation 2: Frequency of Program Types

The purpose of the second analysis was to determine the number of children receiving different components or combinations of components of bilingual programs. NIE identified six bilingual "program types" as representative of significant components of bilingual education programs defined by ESEA Title VII. There are discussed in detail in the results section, but basically they include:

(1) Home Language Arts Plus Other Components, consisting of instruction in Non-English Language Arts, Culture, and Non-English Language Content Instruction plus some combinations of English Language Instruction (i.e., English as a Second Language (ESL), English Language Arts or Remedial or Corrective English);

(2) Home Language Arts Without Non-English Content Instruction, consisting of the same components as the first type above but without Non-English Language Content Instruction;

(3) Home Language Arts Without Instruction in Culture, consisting of the same components as the second type above but without instruction in Home Language Culture;

(4) English as a Second Language (ESL) with Other Components, consisting of ESL, some other combinations of Non-English and English Language Instruction, but excluding Non-English Language Arts;

(5) English as a Second Language, consisting of ESL only, with no other program components; and

(6) English Medium Instruction, where no English as a Second Language instruction is provided and other components are mixed.

Table 15 shows the type of program and generally its components.

For each program type, several "patterns" of services were identified, each as an example of the program type. A total of 34 patterns were delineated. Some of these were not expected to actually occur among school district programs but were included to ensure representativeness in the event that they did occur. All could be derived from responses to PS items. Section 5, Results of PS Analyses, provides a more detailed description of the 34 patterns.

The analysis design specified frequency counts of LESA and nonLESA children for each of the 34 patterns. The patterns were mutually exclusive such that a child could be characterized by only one pattern. The number of children per pattern were also to be crosstabulated for LESAs by the two age groups within each subpopulation. The crosstabulations were unweighted because a small number of cases was expected to be obtained in several cells after distribution across so many patterns.

Recommendation 3: Staff and Time Allocation

The reviewers for the analysis design noted that a shortage of qualified professional staff in bilingual classrooms is often reported. Due to this shortage, students who receive non-English language instruction most probably receive it from non-professionals and/or receive it for short amounts of instructional time. Recommendation 3 was to test these two hypotheses.

Among LESAs only, crosstabulations were planned to examine the staff and time allocations for children receiving home language arts and English language instruction. For each item measuring time spent in instruction per week and professional training of staff, a staff by time matrix was planned. Each matrix would show the number of LESAs per cell. Items providing staff and time information were those measuring the five components of programs shown in Table 15: Non-English Language Arts, Home Language

Table 15. Components of Program Types*

Program Type	Home Language Arts			English Language Instruction	
	Non-English Language Arts	Culture	Non-English Content Instruction	English Language Arts, Remedial or Corrective English	ESL
1. Home Language Arts Plus Other Components	+	+	+	+/-	
2. Home Lanugage Arts Without Non-English Content Instruction	+	+	-	+/-	
3. Home Lanugage Arts Without Instruction in Culture	+	-	+/-	+/-	
4. English as a Second Language with Other Components, Excluding Non-English Language Arts	-	+/-		+/-	+
5. English as a Second Language Only	-			-	+
6. English Medium Instruction with No ESL	+/-			+/-	-

* +: Component present
-: Component not present
+/-: Component may or may not be present

Culture, Non-English Content Instruction, English Language Arts or Remedial or Corrective English, and English as a Second Language. The staff by time matrices were not done to count nonLESA children but counts of LESAs by the two age groups and the two language groups were to be obtained. These analyses were planned as unweighted due to the expectation of a low number of cases per cell.

Recommendation 4: Minimal Bilingual Education Services

The PS requested information on the extent to which the educational needs of LESA children were being met through school provided programs. Reviewers recommended qualitative standards that could be associated with the six program types identified in Recommendation 2. These qualitative standards went beyond the presence or absence of instruction and included amount of instructional time, professional level of staff, and use of language assessment.

Because the program components for each program type were not treated in exactly the same manner as in Recommendation 2, the program types under Recommendation 4 have been renamed and are referred to as types of instruction. Table 16 provides an overview of what is discussed in detail in section 5.

The reviewers suggested that the first two types of instruction represented services that could meet a minimal definition of ESEA Title VII. Bilingual-Bicultural A and B differ in that Type A requires some Non-English Content Instruction and more instructional time in Home Language Arts. The other types of instruction were considered lacking in the minimal requirements.

For analysis purposes, it was decided to treat the six types of instruction as a hierarchical scale, where the first type represented the most extensive services provided to children and the sixth type represented the least services. Any given child could qualify as a recipient of more than one type of instruction. To make the categories mutually exclusive, a child receiving more than one type was coded only as a recipient of the most extensive services applicable to him or her.

To account for all of the cases in the data base, two additional categories were defined. Type 7 was used to represent children not enrolled in school and 8 was used to represent those receiving a pattern of services not defined in Table 16. The eight categories of type of instruction were to be cross-tabulated by LESA/nonLESA, by LESA by language group, and by LESA by age group. Weighted as well as unweighted counts were requested by NIE.

Recommendation 6: Educational Needs

Recommendation 6 focused on the characteristics that would be expected of children with limited English speaking ability in contrast to those with more proficiency in English. Characteristics considered were low reading achievement, overagedness in grade, grade repetition, and participation in

Table 16. Components of Types of Instruction*

Type of Instruction	HLA			ELI			Staff	Assessment		
	NELA	CULT	NECI	ELA RCE	ESL	CULT		ELP	NELP	READ
1. Bilingual-Bicultural A	+	+/-		+/-			Professional only	+		
	≥ 10 hours			≥ 5 hours						
2. Bilingual-Bicultural B	+	+	-	+/-			Professional only	+		
	≥ 5 hours			≥ 5 hours						
3. Bilingual	+	-	-	+/-			Professional only	+		
	≥ 5hrs			≥ 5 hours						
4. English Language Instruction and Culture	n.a.	+/-	n.a.	n.a.	+	+/-	Professional only	+	n.a.	
5. English as a Second Language	n.a.			n.a.	+	n.a.	Professional only	+	n.a.	
				≥5hrs.						
6. English Language Medium Instruction	n.a.			+	n.a.		n.a.	n.a.		

* HLA: Home Language Arts Instruction
NELA: Non-English Language Arts (item 10a)
CULT: Culture (items 9, 10e)
NECI: Non-English Content Instruction (items 10b, 10c, 10d, 10f)
ELI: English Language Instruction
ELA/RCE: English Language Arts/Remedial or Corrective English (items 7a, 7ab)
ESL: English as a Second Language (item 7c)
CULT: Culture (item 9)
+: Component is required
+/-: Components are in some combination
n.a.: Not applicable, not considered in defining the type of instruction
≥: Greater than or equal to the instruction time indicated (hours per week)
ELP: English Language Proficiency (item 13)
NELP: Non-English Language Proficiency (item 15)
READ: Non-English Language Reading Assessment (item 16d)

special education classes or special instructional services. Survey items were used to operationally define each of the characteristics.

Reading achievement (item 16e) was defined in terms of years below grade level. Overagedness was considered to be more than two years older than the age expected for each grade level. Grade level (Item 2) in comparison to the child's age was used to create an overagedness variable. Grade repetition (item 4) was defined in terms of frequency of repetition. The special services considered were education for the handicapped (item 11a), diagnostic services (item 11b), and special provisions such as instructional material, language laboratories, tutoring, and low pupil/teacher ratio classes (item 12). Both weighted and unweighted frequency counts for each characteristic were to provide a comparison of LESA and nonLESA children, also by age and language groups.

4.1.2 Recoding Open-Ended Items

Four major editing tasks were undertaken by RDI to restructure the PS responses so that the PS analyses could be obtained. The editing tasks were applied to all cases with completed surveys. This included some 15 to 18 year old children and some children without completed LM&AI tests. The tasks were to: (1) convert open-ended item codes to those responses originally printed on the PS questionnaire; (2) convert blanks to zeroes to represent missing data or no response; (3) check for out-of-range responses, and (4) compare item totals to check if the appropriate skip pattern was used. Problems were identified by means of a frequency count of all the PS items.

Many of the PS items allowed respondents to insert answers or clarify their selected responses. RDI developed a system for coding these open-ended responses prior to entry of data on computer. Due to the relatively small number of cases available for the PS analysis (n=830 for New York and the Remainder of the U.S.) and the large number of crosstabulation cells required by the PS analysis plan, RDI decided to reduce the number of response alternatives by coding all open-ended responses as "other." In support of this decision, it was noted that only a few items had substantial numbers (i.e., more than 10) of any given open-ended response. To preserve the information obtained from the open-ended items, a list of the responses given was compiled and is provided in Appendix A. The coding of responses to each item after the recoding was complete may be found in Appendix B.

The second editing task was to convert blanks to zeroes where zeroes could represent "no response." This was done on all but two items, item 2 and item 3. In each case, zero was assigned a legitimate response (i.e., kindergarten as a grade level). "No response" on these two items was coded as "99." On all other items, zero did <u>not</u> represent a valid response (such as "none") but only no response, blank, or missing data.

Item frequency counts were checked to see if any responses were out-of-range or unreasonable. Six items were found with what appeared to be inappropriate

responses. Five of the six items requested number of hours of instruction received per week or days of school per year (items 6a, 6b, 7c-2, 10a-1 and 10c-2). Responses of 40 hours per week or more were considered unreasonable. To test this assumption, 25% of these cases were checked against the actual PS forms. In all cases the forms showed the same response as that entered on the computer file. The responses, therefore, were not edited since they accurately indicated the school district's response.

The sixth item dealt with the date of the child's last assessment by month and year (item 13f). In this case, month could only be coded 1 to 12 or blank but the year could be any year prior to 1978. Two cases showed out-of-range months and these were recoded as blanks, missing data. Two cases indicated that testing was done prior to 1970, but again these reflected actual school responses, so the responses were not altered.

The final check was for skip pattern. Editors corrected most of the skip pattern errors prior to data entry, but twelve items were found to have more respondents than the appropriate screening item response indicated possible. On all but one item, the number of "extra" responses did not exceed five cases. RDI decided not to edit either the screener item or the following subpart items for these reasons. First, the error applies to a small number of cases and may be assumed to be random. Any affect on the analysis would not be systematic or substantial. Secondly, applying a general editing rule to convert the screening item to the appropriate response would require converting all items on the questionnaire with subpart items. Almost <u>every</u> item had a screener question. This method of editing cases could lead to a substantial alteration of responses affecting several cases. Finally, RDI recognized that the appropriate editing strategy was to identify individual cases with conflicting entries, look up the actual responses on the PS forms, and identify appropriate changes for each case. Neither item nor resources were available to edit individual items by hand. Because these errors were not expected to influence the PS analysis results substantially, these 11 items remained as entered regardless of answers to screener items.

On one item (number 16b), 53 more cases answered the item than did the previous screening item (16a). The skip pattern here was opposite that for other items (i.e., to continue if "no" was checked instead of "yes") and obviously confused many respondents. Because so many cases were involved and the reason for the inconsistency was obvious, responsesto items 16a and 16b were made consistent. Response to item 16b was coded "0" ("no response") if item 16a was coded "0" ("no response") or "1" ("Yes, skip to item 16c"). The net effect was to change 70 "no" codes on item 16b into "0" or "no response" codes.

The recoding was executed when a PS analysis data file was being created. The master file of all survey information was updated as well as the Pupil Survey file. A second frequency count of items was run and reviewed to check the accuracy of the recoding.

4.1.3 Creating Analysis Variables

To implement the NIE recommendations for the PS analysis, two steps were taken to create new variables. First, the items where the respondent could enter as many answers as desired had to be reformatted. Variables were created where each column contained a "1" if the answer to one of these items was marked and a "0" otherwise. Items reformatted in this manner included item numbers 11a, 11b, 11c, 13c, 14c, 15c, 16c, 16d, 16f, 17a, 17b, and 17c. A total of 59 new binary variables were created from the response alternatives to these items. The 59 variables were added to the end of the PS record for each child. (Appendix B shows how the responses were reformatted into 59 separate variables.)

Finally, new variables were created from PS item responses to represent the operational definitions of variables in the NIE recommendations. These are discussed in section 3.1.1. above and section 4 on the results of the analysis. These "analysis variables" represent primarily the 34 program patterns (Recommendation 2) and the six types of instruction (Recommendation 4). (See Appendix B for a listing.) The variables were added to the data file at the end of the PS record for each child.

To check the new variables, they were included in the frequency count of all PS item responses. These variables were created only among children eligible for the PS analysis. Records on the PS analysis file then were updated, but records on the master file of all cases were not.

4.2 PS Non-Response Weight Adjustment

The LESA count phase of the CESS study, reported in the RDI Volume I, Technical Report (January, 1979), resulted in the assignment of weights to eligible NELB children on the basis of questionnaire non-response and subsampling. These weights provided national estimates of NELB and LESA children. Because the Pupil Survey was an additional attempt to obtain information from the sample, the previous weights had to be corrected for those failing to return the questionnaire. The PS weight adjustment, then, increased the previous weights by a proportion representative of the number of PS respondents.

As discussed in section 2.2., Updating PS Disposition Codes, each child with a completed LM&AI test was assigned a PS disposition code to indicate the outcome of the PS effort for his or her case. Codes from 1 to 6 were assigned (see Table 12). Those with code 6 (i.e., those not enrolled in school in the Spring, 1978) were excluded from the weight adjustment procedures because the population consisted only of children in schools from which PS information could be obtained. Code 1 cases had completed PS forms. Cases with codes 2 through 5 were classified as non-respondents.

The PS weight adjustment was done on the basis of the number of completed surveys as compared to the number of possible completed surveys, or the response rates by subpopulation. The response rates were 37.9%, 10.2%, 63.9%, and 79.1% respectively for California, Texas, New York, and the Remainder of the U.S. (see Table 14). Because California and Texas had response rates below 65%, a rule of thumb determinant, they were excluded from the [illegible] analysis. The weighting and tabulation of these cases is, therefore, not reported in this document. NIE requested that California be given special consideration and results of analyses on California were provided to NIE in a separate technical report.

The weighting procedures, applied to New York and the Remainder of the U.S. were comparable to those used to calculate the LM&AI test non-response adjustment. All but 5 to 14 year old children with completed LM&AI tests were excluded. Eight non-response adjustment ratios were computed on the basis of the remaining cases for New York and the Remainder of the U.S. The cases were grouped by SMSA (Standard Metropolitan Statistical Area) and density, sampling characteristics of the areas from which the cases were selected. The ratios were found by dividing the weighted number of children eligible to receive a PS questionnaire (disposition codes 1 through 5) by the weighted number of children with completed PS forms (code 1 only) within each SMSA and density group. The child's last weight, adjusted to the distribution of cases from the 1974 Survey of Income and Education, was used. Table 17 shows the eight groups and the obtained ratios.

The ratios for SMSA and nonSMSA groups in New York were the same because New York had no cases from nonSMSA areas, thereby eliminating the distinction. The ratios were comparable in size to those obtained in previous weight adjustments. Each child's weight was multiplied by the appropriate ratio to produce the child's PS weight. The weights that were adjusted were those resulting from the final weight adjustment in the LESA count phase of the study. To be consistent with the LESA count report on weighting procedures, the PS weight may be referred to as the $BCW^{(4)}$, the fourth adjustment to the basic child weight.

A new computer program was written to compute the PS weights. The program added the resultant weights to the master file of all cases and to the data file to be used in the weighted crosstabulations specified in NIE's analysis plan. Any child not participating in the PS study (i.e., those not enrolled in school, all 15 to 18 year old children, and those from Texas) received a weight of zero on the data files to ensure exclusion from the analysis. The non-zero weights for New York and the remainder of the U.S. ranged from 173 to 87,029.

Table 17. PS Non-Response Adjustment Ratios

Subpopulation	Low Density		High Density	
	SMSA	NonSMSA	SMSA	NonSMSA
New York	1.3709	1.3709	1.6281	1.6281
Remainder of U.S.	1.2670	1.5078	1.1707	1.4105

4.3 PS Coefficients of Variance

RDI developed computer software to compute coefficients of variance (CVs) for 15 characteristics of NELB and LESA children specified by NIE in the LESA Count phase of the study. The software was modified to compute CVs for items requested in the PS analysis plan. The procedures for computing the CVs were not changed. These are documented in the RDI Volume I and Volume III reports (January, 1979).

Modification of the software to create an input file for the CV program was necessary. Although not written as general purpose software, the program to create the input file could be used as the basis for generating a PS input file. The primary difference was that the LESA Count CVs were computed for totals of NELB children, totals of LESA children among the NELBs, and proportions of LESAs among NELBs; the PS analysis plan specified CVs on LESA children only for selected PS items.

The PS analysis plan specified variables for which CVs were to be computed. The variables were either items appearing on the PS questionnaire or variables created from these items. CVs were to be computed for the following:

Item 4 - Repetition of a grade

Item 13e - English proficiency classification by school assessment results

Item 16e - Reading achievement level in English by school judgment or test results

Item 17a-3 - Receiving ESEA Title VII federal support

Item 17b-1 - Receiving state bilingual program support

Item 17c-1 - Receiving local bilingual program support

Variable 204 - Types of instruction received based on Recommendation 4 analyses

Variable 206 - Overage, comparison of expected age to grade level reported in item 2

Variable 208 - Receiving education services for the handicapped as reported in item 11a

Variable 209 - Receiving diagnostic services as reported in item 11b

Variable 210 - Desirable to have had special provisions (items 12a-d).

The computation of CVs was limited by the concern for adequate cell sizes. Examination of the responses to each of these items was limited to LESAs because they comprise the largest group of respondents. The results of the CV computations are presented in the next section with the results of the analyses on the NIE recommendations.

5. Results of PS Analyses

5.1 Creation of the Analysis Data File

Because most of the information on the master data file (containing Screener Questionnaire, Household Questionnaire, and LM&AI test responses) was not needed for the PS analyses, a smaller file was created with only the PS item responses and selected information from the master file. This file was used in addressing the NIE recommendations. The open-ended item responses were recoded on both files. Only the PS file, however, included the binary items representative of survey questions where more than one response was acceptable. The data maps for both files may be found in section 6, PS File Documentation.

5.2 Results for Recommended Analyses

Five of NIE's recommended PS analyses were included in the current scope of work. For each recommendation three sets of tables were generated. These included: PS items by LESA, items by LESA by language group, and items by LESA by age group. Each set of tables was done separately for New York and the Remainder of the U.S. with unweighted and weighted counts. The requested analyses resulted in over 4,000 pages of computer output, submitted as separate attachments. Because of resource constraints, all of the implications of the tables generated cannot be discussed at this time. The following presentation, therefore, focuses on the specific analysis recommendations with minimal additional exploration of the data.

It should be noted that data are incomplete for Tables 20, 21, 30 and 31. This applies to weighted as well as unweighted counts, so that the total weighted counts given in these tables are less than the sub-population estimates given in Tables 18 and 19.

Recommendation 1: Description of the Data Base

All PS items and created variables were crosstabulated by (1) LESA/nonLESA, (2) language groups, Spanish and other non-English, within LESA/nonLESA groups, and (3) age groups, 5 to 8 and 9 to 14 years old, within LESA/nonLESA groups. All tables were produced for unweighted and weighted counts within New York and the Remainder of the U.S. separately. Some particularly relevant data describing the respondents has been included here in Tables 18 and 19.

Tables 18 and 19 show the LESA, language, and age group characteristics of the 175 respondents from New York and the 655 respondents from the Remainder of the U.S. Of note is that 79.6% of the New York and 49.9% of the Remainder of the U.S. weighted cases were classified as LESAs. These percentages for PS respondents compare with 76.9% and 52.9%, respectively, for all 5 to 14 year olds in the two subpopulations. The distribution of LESAs among PS respondents indicates that the respondents are representative of 5 to 14 year old NELB children in the two areas.

Table 18. Descriptive Characteristics of New York Respondents*

Characteristic	Unweighted		Weighted	
	N	%	N	%
LESA	146	83.4	471,248	79.6
NonLESA	29	16.6	120,895	20.4
Spanish	140	80.0	353,586	59.7
Other	35	20.0	238,556	40.3
5-8 yrs. old	81	46.3	290,404	49.0
9-14 yrs. old	94	53.7	301,738	51.0

*Total n = 175 or 592,143 weighted cases.

Table 19. Descriptive Characteristics of Remainder of U.S. Respondents*

Characteristic	Unweighted		Weighted	
	N	%	N	%
LESA	433	66.1	833,996	49.9
NonLESA	222	33.9	836,777	50.1
Spanish	406	62.0	749,936	44.9
Other	249	38.0	920,837	55.1
5-8 yrs. old	337	51.5	834,309	49.9
9-14 yrs. old	318	48.5	836,464	50.1

*Total n = 655 or 1,670,773 weighted cases.

As expected New York has more Spanish NELB children and the Remainder of the U.S. has more other non-English language children. The age distributions were approximately equal in both geographic areas.

Four PS items were of particular interest in illustrating the level of need for bilingual services and the current resources available to meet the needs. Tables 20 and 21 provide frequencies of respondents by the LESA/nonLESA criterion within subpopulations. The item addressing grade repetition indicates that both LESAs and nonLESAs tended to have never repeated a grade or course. Of those who had repeated, however, the clear majority were LESA children.

In New York, the ratings of English proficiency provided by school assessment records or professional and/or teacher ratings were confusing. One would expect nonLESAs to be rated as "adequate" or "very well" and LESAs as "limited." Only a slight trend in this direction is seen in New York. Perhaps the lack of clarity is due to the omission of 50 or so cases failing to provide an answer to this item. Another possibility could be the tendency for schools to rate all NELB children as deficient in English proficiency. The trend is clearer in the Remainder of the U.S. where the percentage of nonLESAs rated as "very well" is greater than the percentage of LESAs doing "very well" in English proficiency.

The trend with respect to reading achievement is much clearer on the basis of the LESA/nonLESA classification. The children below grade level in reading achievement tend to be LESA children and those above grade level tend to be nonLESA children. Of note is that most of LESAs were reported to be at grade level, while the majority of nonLESAs were one-half year or more above grade level.

Finally, Tables 20 and 21 show that of those receiving programs and services supported by federal, state, or local funds most are LESA children. One-third or less of the children receiving support were nonLESA children. The LESA criterion seemed to agree with screening requirements for special service programs, of interest particularly when considering that all the PS respondents were NELB children.

Recommendation 2: Frequency of Program Types

The purpose of the second analysis was to determine how many children were reported by schools as receiving different components or combinations of components of bilingual programs. Qualitative standards were not of concern in this analysis. Of importance was whether the component was present or not among a child's instructional program.

In section 4.1, Pupil Survey Analysis Plan, six program types delineated by NIE were presented (see Table 15). The analysis task was to identify how

Table 20. Selected School Characteristics of New York Respondents

Characteristics from PS Items	Unweighted				Weighted			
	LESA		NonLESA		LESA		NonLESA	
	N	%	N	%	N	%	N	%
4. Grade repetition:								
(1) at least one grade	21	91	2	9	59,983	81	13,907	19
(2) part of a grade	0	-	0	-	0	-	0	-
(3) never repeated	90	80	23	20	318,685	79	86,590	21
(4) no record	10	100	0	-	33,406	100	0	-
Total	121	83	25	17	412,074	80	100,497	20
13e. English proficiency:								
(1) severely limited	14	100	0	-	21,984	100	0	-
(2) very limited	11	100	0	-	39,636	100	0	-
(3) slightly limited	17	100	0	-	65,197	100	0	-
(4) adequate	32	94	2	6	79,318	96	3,486	4
(5) very well	37	84	7	16	135,650	93	10,750	7
(6) other	1	100	0	-	909	100	0	-
Total	112	93	9	7	342,694	96	14,236	4
16e. Reading achievement:								
(1) 1/2+ yr. above grade	18	53	16	47	67,780	50	68,644	50
(2) at grade level	35	81	8	19	132,121	82	28,303	18
(3) 1/2 - 1 yr. below	24	92	2	8	85,244	89	10,184	11
(4) 1 yr. below	12	100	0	-	36,340	100	0	-
(5) over 1 yr. below	39	98	1	2	93,578	98	2,228	2
Total	128	83	27	17	415,062	79	109,359	21
17. Funding Sources								
17a-3. Federal programs: ESEA Title VII	14	100	0	-	31,927	100	0	-
17b-1. State programs: bilingual	11	92	1	8	28,618	96	1,138	4
17c-1. Local programs: bilingual	14	100	0	-	30,826	100	0	-

Table 21. Selected School Characteristics of Remainder of U.S. Respondents

Characteristics from CPS Items	Unweighted				Weighted			
	LESA		NonLESA		LESA		NonLESA	
	N	%	N	%	N	%	N	%
4. Grade repetition:								
(1) at least one grade	54	89	7	11	81,516	88	10,770	12
(2) part of a grade	3	100	0	-	4,000	100	0	-
(3) never repeated	269	60	178	40	476,511	42	645,290	58
(4) no record	32	87	5	13	57,312	84	10,554	16
Total	358	65	190	35	619,339	48	666,613	52
13e. English proficiency:								
(1) severely limited	13	93	1	7	21,776	79	5,831	21
(2) very limited	33	89	4	11	62,128	79	16,126	21
(3) slightly limited	45	85	8	15	85,376	83	17,846	17
(4) adequate	94	77	28	23	161,664	80	41,689	20
(5) very well	80	52	74	48	114,734	27	315,839	73
(6) other	3	50	3	50	4,480	61	2,859	39
Total	268	69	118	31	450,158	53	400,190	47
16e. Reading achievement:								
(1) 1/2+ yr. above grade	40	31	87	69	75,421	16	380,829	84
(2) at grade level	114	59	79	41	227,835	51	219,377	49
(3) 1/2 - 1 yr. below	73	79	19	21	133,476	68	64,238	32
(4) 1 yr. below	41	89	5	11	92,073	91	9,372	9
(5) over 1 yr. below	110	92	10	8	195,535	92	17,129	8
Total	378	65	200	35	724,339	51	690,944	49
17. Funding Sources								
17a-3. Federal programs: ESEA Title VII	28	67	14	33	62,340	73	23,628	27
17b-1. State programs: bilingual	75	74	26	26	132,478	66	69,771	34
17c-1. Local programs: bilingual	91	74	32	26	143,500	74	50,636	26

many children were receiving each of 33 patterns of bilingual programs where each pattern was illustrative of one of the six program types. NIE provided RDI with detailed operational definitions of the 33 patterns. These definitions are shown in Table 22.

The 33 patterns were not intended to represent every possible type of bilingual program being offered to children by the schools. They were designed to be inclusive of the program components thought to be the most prevalent and the most important to bilingual education. Some were expected to be more prevalent than others. For example, patterns 25 through 33 in Table 22 were not expected to occur often. The first three program types (patterns 1 through 12) were expected to register the largest frequencies. Children in the sample who did not meet the criterion for any of the 33 patterns were assigned a code of 34, other program pattern. These children could have been receiving some services but not in the combinations specified by NIE for this analysis.

The analyses among New York and the Remainder of the U.S. (Tables 23 and 24) respondents indicated that most of the NELB children are receiving English Medium Instruction Without English as a Second Language (ESL) Instruction. This program type encompasses patterns 21 through 33 (see Table 22). In the Remainder of the U.S., Home Language Arts Instruction Without Non-English Language Culture Instruction was also prevalent among LESA children.

An unexpected finding was that none of the NELB children in either subpopulation were receiving the second program type, Some Language Arts Without Non-English Content Instruction. The three patterns in this program type required instruction in Home Language Arts as well as Non-English Language Culture. Apparently, a child receiving English Language Instruction, Home Language Culture, and Non-English Language Arts Instruction was also receiving Non-English Content Instruction. The child would, therefore, always qualify for the first program type. Also surprising was the finding that none of the children were receiving ESL instruction without any additional English language or home language arts instruction. When ESL instruction is provided, it is evidently in conjunction with other bilingual education program components.

Among some program types in the Remainder of the U.S., more nonLESA than LESA children were receiving instruction. This was true of three of the five patterns representing English Medium Instruction with No ESL Instruction. ESL instruction apparently is reserved for NELB children with identifiable English proficiency limitations as opposed to those seeking home language cultural enhancement.

Recommendation 3: Staff and Time Allocation

All of the PS items describing home language arts and English language instruction requested information about the number of hours of instruction

Table 22. Components of Program Types Operationally Defined*

Program Type	Home Language Arts			English Lang. Instruction	
	NELA	CULT	NECI	ELA RCE	ESL
Home Language Arts Plus Other Components					
1	+	+	+	+	+
2	+	+	+	-	+
3	+	+	+	+	-
Home Language Arts Without Non-English Content Instruction					
4	+	+	-	+	+
5	+	+	-	-	+
6	+	+	-	+	-
Home Language Arts Without Instruction in Culture					
7	+	-	-	+	+
8	+	-	+	+	+
9	+	-	-	-	+
10	+	-	+	-	+
11	+	-	-	+	-
12	+	-	+	+	-
ESL With Other Components Without Non-English Language Arts					
13	-	+	+	+	+
14	-	+	-	+	+
15	-	-	+	+	+
16	-	-	-	+	+
17	-	+	+	-	+
18	-	+	-	-	+
19	-	-	+	-	+
ESL Only					
20	-	-	-	-	+

*NELA: Non-English Language Arts (item 10a)
CULT: Non-English Language Culture (items 9, 10e)
NECI: Non-English Content Instruction (items 10b, 10c, 10d, 10f)
ELA/RCE: English Language Arts/Remedial or Corrective English (items 7a, 7ab)
ESL: English as a Second Language (item 7c)
+: Component is required
-: Component is absent

Table 22. Cont'd. Components of Program Types Operationally Defined*

Program Type	Home Language Arts			English Lang. Instruction	
	NELA	CULT	NECI	ELA RCE	ESL
English Medium Instruction					
21	-	-	-	+	-
22	-	-	-	-	-
23	-	+	-	+	-
24	-	+**	-	+	-
25	-	+	+	+	-
26	-	-	+	+	-
27	+	+	+	-	-
28	+	+	-	-	-
29	-	+	+	-	-
30	-	+	-	-	-
31	-	-	+	-	-
32	+	-	-	-	-
33	+	-	+	-	-

*NELA: Non-English Language Arts (item 10a)
CULT: Non-English Language Culture (items 9, 10e)
NECI: Non-English Content Instruction (items 10b, 10c, 10d, 10f)
ELA/RCE: English Language Arts/Remedial or Corrective English (items 7a, 7ab)
ESL: English as a Second Language (item 7c)
+: Component is required
-: Component is absent

**Non-English culture only; item 10e without item 9.
Pattern 23 includes item 9 with or without item 10e.

Table 23. Frequency of Program Types Among New York Respondents

Characteristics from PS Items	Unweighted				Weighted			
	LESA		NonLESA		LESA		NonLESA	
	N	%	N	%	N	%	N	%
1. Home Language Arts With Other Components	17	100	0	-	48,971	100	0	-
2. "	7	100	0	-	8,865	100	0	-
3. "	9	100	0	-	21,135	100	0	-
11. Home Language Arts Without Culture	3	75	1	25	5,643	90	662	10
12. "	1	100	0	-	1,325	100	0	-
13. ESL With Other Components	5	71	2	29	19,699	54	16,635	46
14 "	1	100	0	-	1,698	100	0	-
15. "	5	100	0	-	16,704	100	0	-
16. "	1	100	0	-	928	100	0	-
22. English Medium Instruction With No ESL	50	89	6	11	174,363	84	32,972	16
23. "	8	89	1	11	16,114	67	7,786	33
24. "	1	100	0	-	3,197	100	0	-
27. "	1	100	0	-	2,292	100	0	-
33. "	3	75	1	25	23,218	81	5,595	19
34. All Others	34	65	18	35	127,097	69	57,244	31
Total	146	83	29	17	471,248	80	120,895	20

Table 24. Frequency of Program Types Among Remainder of U.S. Respondents

Characteristics from PS Items	Unweighted				Weighted			
	LESA		NonLESA		LESA		NonLESA	
	N	%	N	%	N	%	N	%
1. Home Language Arts With Other Components	33	97	1	3	52,149	99	696	1
2. "	10	83	2	17	13,406	65	7,101	35
3. "	28	55	23	45	40,182	55	33,071	45
7. Home Language Arts Without Culture	1	100	0	-	840	100	0	-
8. "	9	82	2	18	9,803	78	2,701	22
11. "	36	74	13	26	67,725	80	17,212	20
12. "	6	100	0	-	5,457	100	0	-
13. ESL With Other Components	13	81	3	19	20,022	74	6,884	26
14 "	1	100	0	-	2,512	100	0	-
15. "	11	92	1	8	36,915	97	986	3
17. "	2	100	0	-	5,159	100	0	-
22. English Medium Instruction With No ESL	112	64	63	36	195,782	44	250,341	56
23. "	9	75	3	25	14,886	84	2,802	16
24. "	13	68	6	32	25,774	77	7,788	23
25. "	1	33	2	67	465	16	2,384	84
33. "	9	36	16	64	12,358	16	63,786	84
34. All Others	139	62	87	38	330,560	43	441,025	57
Total	433	66	222	34	833,996	50	836,777	50

per week and the level of training of the staff providing the instruction. This information was obtained for instruction in Non-English Language Arts (item 10a), Culture (item 10e), Non-English Content Instruction (items 10b, 10c, 10d, and 10f), English Language Arts or Remedial [redacted] Corractive English (items 7a and 7b), and ESL instruction (item 7c).

NIE requested that the amount of instructional time in each of these areas be recoded into three groups: (1) one hour or less, (2) over one hour up to two hours, and (3) three hours and more per week. Level of staff was defined as (1) professional, (2) paraprofessional, and (3) other. The "other" category here usually represented a combination of professional and paraprofessional staff.

NIE expected to find that LESA students in bilingual classrooms rarely encounter qualified professionals who speak their non-English language. Those receiving home language instruction were expected to receive minimal amounts due to the lack of staff. Tables 25 and 26 show the crosstabulation of the staff and time information for each of the nine PS items. In general, responses to these items do not support either expectation. In almost all areas of instruction, the instruction was reportedly provided by professional level staff in both New York and the Remainder of the U.S. In most instructional areas, the amount of time per week tended to exceed two hours. At least among the CESS PS respondents, the children receiving instruction were working with professionally trained teaching staff and in some cases were receiving substantial amounts of instructional time in the English language and home language arts areas.

Tables 25 and 26 do provide frequency counts for both LESAs and nonLESAs even though only LESA counts were originally planned. Because computer generated tables provided both, the inclusion of nonLESAs was easy and useful in providing a contrast against which to evaluate the trends found among the LESA respondents. Particularly in the Remainder of the U.S. where more cases were obtained, the comparison of LESA and nonLESA tables shows that LESAs who received special resources at all tended to receive more instructional time than non-LESAs. Schools evidently are focusing their instructional resources on those students in most need of assistance if they offer any special resources for language-minority children.

Recommendation 4: Minimal Bilingual Education Services

NIE provided RDI with a system for "scoring" the PS to identify the level of qualitative services received by each student. The qualitative aspects of the bilingual education components were applied generally to the program types identified in Recommendation 2. NIE wanted to know how many children not only were receiving different types of instruction but whether these were provided by professional level staff, required for minimal amounts of time per week, and based on language assessment information.

NIE expected to find that many of the children receiving instruction under one of the program types in Recommendation 2 would not be receiving the qualitative types of instructional programs defined under Recommendation 4. A limited number of children were expected to be in instructional programs defined by NIE in this analysis as minimal bilingual education services.

Table 25. Staff by Time in English and Home Language Instruction for New York

Level of Staff	Clock Hours Per Week								
	LESA			NonLESA			TOTAL		
	>0≤1	>1≤2	>2	>0≤1	>1≤2	>2	>0≤1	>1≤2	>2
I. Non-English Language Arts (Items 10a-1 and 10a-3)									
Professional	2	6	24	1	0	1	3	6	25
Paraprofessional	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0
Total	2	6	24	1	0	1	3	6	25
II. Non-English Content Instruction in Social Studies or Social Science (Items 10b-1 and 10b-3)									
Professional	7	5	14	0	0	0	7	5	14
Paraprofessional	0	0	1	0	0	0	0	0	1
Other	0	1	0	0	0	0	0	1	0
Total	7	6	15	0	0	0	7	6	15
III. Non-English Content Instruction in Mathematics (Items 10c-1 and 10c-3)									
Professional	1	3	20	0	0	0	1	3	20
Paraprofessional	0	0	2	0	0	0	0	0	2
Other	0	0	0	0	0	0	0	0	0
Total	1	3	22	0	0	0	1	3	22
IV. Non-English Content Instruction in Science (Items 10d-1 and 10d-3)									
Professional	6	10	6	0	0	0	6	10	6
Paraprofessional	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0
Total	6	10	6	0	0	0	6	10	6
V. Non-English Instruction in Culture (Items 10e-1 and 10e-3)									
Professional	19	5	9	0	0	0	19	5	9
Paraprofessional	0	1	1	0	0	0	0	1	1
Other	0	1	0	0	0	0	0	1	0
Total	19	7	10	0	0	0	19	7	10
VI. Non-English Content Instruction in Other Areas (Items 10f-1 and 10f-3)									
Professional	2	1	6	0	0	0	2	1	6
Paraprofessional	0	0	1	0	0	0	0	0	1
Other	0	0	0	0	0	0	0	0	0
Total	2	1	7	0	0	0	2	1	7
VII. Instruction in English Language Arts (Items 7a-2 and 7a-3)									
Professional	0	4	117	0	1	23	0	5	140
Paraprofessional	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0
Total	0	4	117	0	1	23	0	5	140

Table 25 Cont'd. Staff by Time in English and Home Language Instruction for New York

Level of Staff	Clock Hours Per Week								
	LESA			NonLESA			TOTAL		
	>0≤1	>1≤2	>2	>0≤1	>1≤2	>2	>0≤1	>1≤2	>2
VIII. Remedial or Corrective Instruction in the English Language (Items 7b-2 and 7b-3)									
Professional	0	5	22	0	1	1	0	6	23
Paraprofessional	0	1	3	0	0	0	0	1	3
Other	0	0	0	0	0	0	0	0	0
Total	0	6	25	0	1	1	0	7	26
IX. Instruction in English as a Second Language (Items 7c-2 and 7c-3)									
Professional	1	7	26	0	1	0	1	8	26
Paraprofessional	0	1	1	0	0	1	0	1	2
Other	0	0	0	0	0	0	0	0	0
Total	1	8	27	0	1	1	1	9	28

Table 26. Staff by Time in English and Home Language Instruction for the Remainder of U.S.

Level of Staff	Clock Hours Per Week								
	LESA			NonLESA			TOTAL		
	>0≤1	>1≤2	>2	>0≤1	>1≤2	>2	>0≤1	>1≤2	>2
I. Non-English Language Arts (Items 10a-1 and 10a-3)									
Professional	8	13	72	3	9	20	11	21	92
Paraprofessional	1	4	9	2	1	6	3	5	15
Other	0	0	1	0	0	0	0	0	1
Total	9	17	82	5	10	26	14	27	108
II. Non-English Content Instruction in Social Studies or Social Science (Items 10b-1 and 10b-3)									
Professional	25	13	20	4	0	3	29	13	23
Paraprofessional	0	0	1	1	0	0	1	0	1
Other	0	0	0	0	0	0	0	0	0
Total	25	13	21	5	0	3	30	13	24
III. Non-English Content Instruction in Mathematics (Items 10c-1 and 10c-3)									
Professional	14	11	29	2	1	1	16	12	30
Paraprofessional	1	1	0	1	1	0	2	2	0
Other	0	0	0	0	0	0	0	0	0
Total	15	12	29	3	2	1	18	14	30
IV. Non-English Content Instruction in Science (Items 10d-1 and 10d-3)									
Professional	28	9	8	3	0	2	31	9	10
Paraprofessional	0	1	0	0	0	0	0	1	0
Other	0	0	0	0	0	0	0	0	0
Total	29	10	8	3	0	2	31	10	10
V. Non-English Instruction in Culture (Items 10e-1 and 10e-3)									
Professional	34	11	14	11	2	5	45	13	19
Paraprofessional	6	1	2	1	2	2	7	3	4
Other	0	1	0	0	1	0	0	2	0
Total	40	13	16	12	5	7	52	18	23
VI. Non-English Content Instruction in Other Areas (Items 10f-1 and 10f-3)									
Professional	8	3	3	0	0	2	8	3	5
Paraprofessional	1	0	0	1	0	0	2	0	0
Other	0	0	0	0	0	0	0	0	0
Total	9	3	3	1	0	2	10	3	5
VII. Instruction in English Language Arts (Items 7a-2 and 7a-3)									
Professional	2	7	341	0	6	181	2	13	522
Paraprofessional	0	0	2	0	0	0	0	0	2
Other	0	0	1	0	0	0	0	0	1
Total	2	7	344	0	6	181	2	13	525

Table 26. Cont'd. Staff by Time in English and Home Language Instruction for the Remainder of U.S.

Level of Staff	Clock Hours Per Week								
	LESA			NonLESA			TOTAL		
	>0≤1	>1≤2	>2	>0≤1	>1≤2	>2	>0≤1	>1≤2	>2
VIII. Remedial or Corrective Instruction in the English Language (Items 7b-2 and 7b-3)									
Professional	5	11	59	0	1	5	5	12	64
Paraprofessional	0	3	8	3	1	1	3	4	9
Other	0	0	0	0	0	0	0	0	0
Total	5	14	67	3	2	6	8	16	73
IX. Instruction in English as a Second Language (Items 7c-2 and 7c-3)									
Professional	2	6	66	0	1	4	2	7	70
Paraprofessional	0	3	4	1	0	2	1	3	6
Other	1	0	0	0	0	0	1	0	0
Total	3	9	70	1	1	6	4	10	76

Table 16, Components of Types of Instruction, shows how NIE defined the six types of instruction. The presence or absence of English Language and Home Language Arts Instruction was accompanied by the requirements of (1) assessment in language proficiency and reading, (2) professional level staff, and (3) minimal hours of instruction per week. Table 27 is an elaboration of Table 16. The actual PS items used in the operationed definitions of each component are shown. The responses required on each item in order to satisfy the conditions are also indicated. For additional clarification, see the computer program in section 6 used to assign a type of instruction to each child.

Also note that a code of 7 was assigned to children not enrolled in school and code 8 to those not qualifying for any of the six specified types of instruction. The eight categories were operationally defined such that a child was coded as receiving the most extensive type for which he qualified. Each child received only one code and all were coded.

The eight types of instruction were crosstabulated by LESA/nonLESA, by language group within the LESA classifications, and by age group within the LESA classifications. Tables 28 and 29 show the number of LESA and nonLESA children qualifying for each type of instruction for New York and the Remainder of the U.S. The most striking finding was that none of the cases qualified for the Bilingual-Bicultural A type of instruction and only two children qualified for the ESL only type of instruction. Code 7 received no cases because all children not enrolled in school were removed from the data base when the PS weight adjustments were done.

The results indicated that only two children in New York and three in the Remainder of the U.S. were receiving minimal bilingual services as defined by ESEA Title VII. These five cases weighted up to represent 9,036 NELB children or .4% of the PS sample from these two geographic areas. The majority of the cases in New York and in the Remainder of the U.S. did not qualify for any but the most minimal type of instruction (code 6) requiring only that English Language or Remedial or Corrective English Language Instruction be given. The results indicate that if the child is receiving Bilingual-Bicultural services, they are most likely to meet ESEA Title VII standards, Type A.

Of note was that almost all the children receiving identified types of instruction were classified as LESA children. Many more of the code 8 cases not qualifying for one of the defined types were nonLESA children. This suggested that some of those not qualifying for one of the types of instruction actually were not in need of services nor receiving them, as opposed to the conclusion that a major type was omitted from the definitions. Further consideration of the inclusiveness of the types of instruction is needed.

In comparing Recommendation 2 and 4 results, NIE's expectation that fewer children would qualify for the types in Recommendation 4 than those in Recommendation 2 was justified. In New York, 33 children qualified for the first program type. Only two of these were classified as receiving the comparable Bilingual-Bicultural A type of instruction. Only one of 12 children in the ESL program type remained in the ESL category when qualitative standards were applied. As a result, the number coded as "other" almost tripled.

Table 27. Operational Definitions of Types of Instruction*

I. Bilingual-Bicultural A

A. Assessment

(1) English language proficiency
13c = 1 (standardized tests)
AND
13d = 1 (used with this student)
AND

(2) Non-English language proficiency
15c = 1 (standardized tests)
AND
15d = 1 (used with this student)
AND
16d = 2 (tested in reading)
AND

B. English Language Instruction

7a2 $\geq$ 5 and 7a3 = 1 (English language instruction-time and staff)
OR
7b2 $\geq$ 5 and 7b3 = 1 (remedial or corrective English instruction-time and staff)
OR
7c2 $\geq$ 5 and 7c3 = 1 (ESL-time and staff)
OR
9 = 1 or 2 or 3 or 4 (non-English language culture)
OR
7a2 (if 7a3 = 1) + 7b2 (if 7b3 = 1) + 7c2 (if 7c3 = 1) $\geq$ 5
AND

C. Home Language Arts

(1) Time and staff
10a1 $\geq$ 10 and 10a3 = 1 (non-English language arts)
OR
10b1 $\geq$ 10 and 10b3 = 1 (non-English content instruction in social studies)
OR
10c1 $\geq$ 10 and 10c3 = 1 (non-English content instruction in math)
OR
10d1 $\geq$ 10 and 10d3 = 1 (non-English content instruction in science)
OR
10e1 $\geq$ 10 and 10e3 = 1 (non-English instruction in culture)
OR

*The numbers shown are PS item numbers and the responses needed for each item to qualify. The "AND" and "OR" connectors between lines are the logical conditions used in "scoring" the types.

Table 27. Cont'd. Operational Definitions of Types of Instruction

10f1 ≥ 10 and 10f3 = 1 (non-English content instruction in other areas)
OR
10a1 (if 10a3 = 1) + 10b1 (if 10b3 = 1) + 10c1 (if 10c3 = 1) + 10d1 (if 10d3 = 1) + 10e1 (if 10e3 = 1) + 10f1 (if 10f3 = 1) ≥ 10
AND

(2) Content and Culture
10a = 1 (non-English language arts)
AND
10b = 1 (non-English content instruction in social studies)
OR
10c = 1 (non-English content instruction in math)
OR
10d = 1 (non-English content instruction in science)
OR
10e = 1 (non-English instruction in culture)
OR
10f = 1 (non-English content instruction in other areas)
OR
9 = 1 or 2 or 3 or 4 (non-English language culture)

II. Bilingual-Bicultural B

A. Assessment - same conditions apply as above
AND

B. English Language Arts Instruction - same conditions apply as above
AND

C. Home Language Arts

(1) Time and staff
10a1 ≥ 5 and 10a3 = 1 (non-English language arts)
OR
10e1 ≥ 5 and 10e3 = 1 (non-English instruction in culture)
OR
10a1 (if 10a3 = 1) + 10e1 (if 10e3 = 1) ≥ 5
AND

(2) Content and Culture
10a = 1 (non-English language arts)
AND
10e = 1 (non-English instruction in culture)
OR
9 = 1 or 2 or 3 or 4 (non-English language culture)

III. Bilingual

A. Assessment - same conditions apply as above
AND

Table 27. Cont'd. Operational Definitions of Types of Instruction

B. English Language Arts Instruction - same conditions apply as above

AND

C. Home Language Arts

(1) Time and Staff
10a1 ≥ 5 and 10a3 = 1 (non-English language arts)
AND

(2) Content and Culture
10a = 1 (non-English language arts)

IV. English Language Instruction and Culture

A. Assessment
13c = 1 (English language standardized tests)
AND
13d = 1 (used with this student)
AND

B. English Language Instruction
7c1 = 1 and 7c3 = 1
AND
9 = 1 or 2 or 3 or 4 (non-English language culture)
OR

C. Home Language Arts
10e = 1 and 10e3 = 1 (English instruction in culture by professional staff)

V. English as a Second Language

A. Assessment
13c = 1 (English language standardized tests)
AND
13d = 1 (used with this student)
AND

B. English Language Instruction
7c2 ≥ 5 and 7c3 = 1 (ESL - time and staff)

VI. English Language Medium Instruction

B. English Language Instruction
7a1 = 1 (English language instruction)
OR
7b1 = 1 (Remedial or corrective English instruction)

Table 27. Cont'd. Operational Definitions of Types of Instruction

VII. Not Enrolled in School Check to verify school enrollment on Household Questionnaire item H1
VIII. Did Not Qualify All cases not qualifying for one of the above types of instruction

In the Remainder of the U.S., the same trend was evident. Of 71 children receiving the first program type services, only three qualified as Bilingual-Bicultural A cases. For the third program type, only 1 of 52 children qualified for the Bilingual type of instruction when qualitative standards were applied. The group of 37 receiving ESL instruction was reduced to one child in the Recommendation 4 analysis. Again, the numbers qualifying for one of the specified types decreased from the Recommendation 2 to Recommendation 4 analyses.

Recommendation 6: Educational Needs

Four PS items were selected to indicate a child's level of educational needs (Tables 30 and 31). Reading achievement was expected to be lower for LESA than nonLESA children. As measured by item 16e, both New York and the Remainder of the U.S. showed that those below grade level in reading achievement were predominantly LESAs. Those at or close to their grade level tended to be nonLESAs in the Remainder of the U.S., but LESAs in New York. It should be remembered that all of these children are from NELB households and all may be in need of instruction to improve reading achievement to such an extent that the LESA/nonLESA differentiation is not significant.

To define overagedness in grade, NIE specified that the child's age should be within two years of the expected age for children at that grade level. Since 5 years of age is the ususual age to begin school, overage was defined as: (1) not overage if grade level plus seven years was greater than actual age and (2) overaged if grade level plus seven years was less than or equal to actual age. Of those found to be overaged, the majority were LESA children. However, most of the children in both groups tended not to be overaged. The expectation that LESA children tend to be behind in grade level was not borne out by the data.

Table 28. Frequency of Types of Instruction Among New York Respondents

Characteristics from PS Items	Unweighted				Weighted			
	LESA		NonLESA		LESA		NonLESA	
	N	%	N	%	N	%	N	%
1. Bilingual-Bicultural A	2	100	0	-	3,708	100	0	-
4. English Language Instruction and Culture	10	100	0	-	30,993	100	0	-
5. ESL	1	100	0	-	1,807	100	0	-
6. English Language Medium Instruction	26	93	2	7	88,062	91	8,619	9
8. Did not qualify for one of above	107	80	27	20	346,678	76	112,276	24
Total	146	83	29	17	471,248	80	120,895	20

Table 29. Frequency of Types of Instruction Among Remainder of U.S. Respondents

Characteristics from PS Items	Unweighted				Weighted			
	LESA		NonLESA		LESA		NonLESA	
	N	%	N	%	N	%	N	%
1. Bilingual-Bicultural A	3	100	0	-	5,328	100	0	-
3. Bilingual	1	100	0	-	1,084	100	0	-
4. English Language Instruction and Culture	17	94	1	6	22,964	80	5,831	20
5. ESL	1	100	0	-	6,007	100	0	-
6. English Language Medium Instruction	75	89	9	11	162,022	89	20,473	11
8. Did not qualify for one of above	336	61	212	39	636,591	44	810,474	56
Total	433	66	222	34	833,996	50	836,777	50

Table 30. Frequency of Indicators of Need Among New York Respondents

Characteristics from PS Items	Unweighted				Weighted			
	LESA		NonLESA		LESA		NonLESA	
	N	%	N	%	N	%	N	%
16e. Reading Achievement:								
(1) more than 1 year below grade	39	98	1	2	93,578	98	2,228	2
(2) at or close to 1 year below	36	95	2	5	121,584	92	10,184	8
(3) at or close to grade level	53	69	24	31	199,901	67	96,947	33
Total	128	83	27	17	415,062	79	109,359	21
2. Overagedness in Grade:								
(1) not averaged	121	82	26	18	410,355	80	102,554	20
(2) overaged one or more years	9	100	0	-	20,201	100	0	-
Total	130	83	26	17	430,556	81	102,554	19
4. Grade Repetition:								
(1) repeated at least one grade or course	21	91	2	9	59,983	81	13,907	19
(2) repeated part of a grade	0	-	0	-	0	-	0	-
(3) no grade repetition	90	80	23	20	318,685	79	86,590	21
(4) no record	10	100	0	-	33,406	100	0	-
Total	121	83	25	17	412,074	80	100,497	20
11-12 Special Education:								
11a. receives education for the handicapped	12	92	1	8	44,217	95	2,381	5
11b. receives diagnostic services	17	85	3	15	68,993	93	14,081	17
12a-d. needs special provisions	77	95	4	5	220,908	94	13,793	6

Table 31. Frequency of Indicators of Need Among Remainder of U.S. Respondents

Characteristics from PS Items	Unweighted				Weighted			
	LESA		NonLESA		LESA		NonLESA	
	N	%	N	%	N	%	N	%
16e. Reading Achievement:								
(1) more than 1 year below grade	110	92	10	8	195,535	92	17,129	8
(2) at or close to 1 year below	114	83	24	17	225,549	75	73,610	25
(3) at or close to grade level	154	48	166	52	303,256	34	600,206	66
Total	378	65	200	35	724,339	51	690,944	49
2. Overagedness in Grade:								
(1) not averaged	334	63	200	37	631,330	45	775,776	55
(2) overaged one or more years	44	94	3	6	73,390	94	5,101	6
Total	378	65	203	35	704,719	47	780,877	53
4. Grade Repetition:								
(1) repeated at least one grade or course	54	89	7	11	81,516	88	10,770	12
(2) repeated part of a grade	3	100	0	-	4,000	100	0	-
(3) no grade repetition	269	60	178	40	476,511	42	645,290	58
(4) no record	32	87	5	13	57,312	84	10,554	16
Total	358	65	190	35	619,339	48	666,613	5[illegible]
11-12. Special Education:								
11a. receives education for the handicapped	45	83	9	17	86,454	87	13,463	13
11b. receives diagnostic services	48	74	17	26	86,379	49	88,237	51
12a-d. needs special provisions	160	83	34	17	327,870	85	59,653	15

The pattern of responses on item 4, grade repetition, was similar to that on overage. If a grade or course had been repeated, it was most likely to have been a LESA rather than nonLESA child. However, most of the children in the sample had not repeated a grade or course. This characteristic cannot be acclaimed as a LESA characteristic on the basis of this study.

Finally, to examine services in relationship to need, items 11a, 11b, and 12a-d were crosstabulated with LESA/nonLESA. The special education services included any combination of services for mental retardation, learning disabilities, physical disabilities, speech impairments, or social or emotional handicaps. Of those receiving these services, the majority were LESA children. Diagnostic services were available in the areas of visual, auditory, and other physical impairments. Those receiving these services also tended to be LESA children.

Most of the children in both subpopulations were not receiving any services. Item 12 addressed the question of whether special services were needed or not. Again, only a small number of cases were rated as needing special provisions because of the child's non-English language background. Of those not receiving special provisions, but in need of them, the majority were LESA children.

5.3 Results of Computations of Coefficients of Variance

The following tables illustrate the magnitude of the CVs that can be expected to be obtained on PS item responses. Tables 32 and 33 contain CVs for variables NIE identified as most important in the PS analysis. The 11 variables relate to the NIE Recommendations as follows:

Item 4	- Recommendation 6:	Educational Needs
Item 13e	- Recommendation 1:	Description of the Data Base
Item 16e	- Recommendation 6:	Educational Needs
Item 17a(3)	- Recommendation 1:	Description of the Data Base
Item 17b(1)	- Recommendation 1:	Description of the Data Base
Item 17c(1)	- Recommendation 1:	Description of the Data Base
Variable 204	- Recommendation 4:	Minimal Bilingual Education Services
Variable 206	- Recommendation 6:	Educational Needs
Item 11a	- Recommendation 6:	Educational Needs
Item 11b	- Recommendation 6:	Educational Needs
Item 12a-d	- Recommendation 6:	Educational Needs

The CVs obtained were generally extremely large. This was expected because the number of respondents choosing any given alternative tended to be small. In New York, where the total number of cases was 175, the CVs ranged from 13.31% to 105.26%. In the Remainder of the U.S., with 655 cases, the CVs ranged from 14.05% to 100.00% (see Tables 32 and 33).

CVs were only computed for LESA respondents since most other groups would have produced even smaller cell sizes and larger CVs. The size of the CVs indicate that caution is needed when estimating the number of LESA children in each response category. The range of LESA totals per response category is so great that many of the items produce unrealistically high totals of LESA. In general, the CV findings indicate that the PS analysis results can be used to indicate trends among NELB children but should be cautiously used to obtain counts of LESA children by subpopulation.

Table 32. Coefficients of Variance for Selected PS Items
Among New York Respondents

Cateogry of PS Items	LESA Totals		LESA Counts					
	Unweighted N	Weighted N	CV		Variation at 95% C.L.		Range	
			Relvariance	%	%	N	Minimum	Maximum
4. Grade repetition								
(1) At least one grade	21	59,983	.091948	30.32	60.65	± 36,377	23,606	96,361
(2) Part of a grade	0	0	0	0	0	0	0	0
(3) Never repeated	90	318,685	.048073	21.93	43.85	±139,748	178,937	458,433
(4) No record	10	33,406	.372776	61.06	122.11	± 40,792	--*	74,198
13e. English proficiency								
(1) Severely limited	14	21,984	.029430	17.16	34.31	± 7,543	14,441	29,527
(2) Very limited	11	39,636	.333690	57.77	115.53	± 45,792	--*	85,429
(3) Slightly limited	17	65,197	.017704	13.31	26.61	± 17,350	47,847	82,547
(4) Adequate	32	79,318	.100742	31.74	63.48	± 50,351	28,967	129,669
(5) Very well	37	135,650	.138341	37.19	74.39	±100,908	34,742	236,557
(6) Other	1	909	1.108033	105.26	210.53	± 1,913	--*	2,822
16e. Reading achievement:								
(1) 1/2+ yr. above grade	18	67,780	.044310	21.05	42.10	± 28,535	39,245	96,316
(2) At grade level	35	132,121	.053386	23.11	46.21	± 61,054	71,067	193,175
(3) 1/2-1 yr. below	24	85,244	.086092	29.34	58.68	± 50,023	35,220	135,267
(4) 1 yr. below	12	36,340	.087932	29.65	59.31	± 21,552	14,788	57,892
(5) Over 1 yr. below	39	93,578	.188607	43.43	86.86	± 81,280	12,298	174,857
17. Funding Sources								
17a(3). Federal programs: ESEA Title VII	14	31,927	.240372	49.03	98.06	± 31,306	621	63,233
17b(1). State programs: Bilingual	11	28,618	.166376	40.79	81.58	± 23,346	5,272	51,964
17c(1). Local programs: Bilingual	14	30,826	.242647	49.26	98.52	± 30,370	457	61,196

*Determination of the lower confidence interval boundary resulted in a negative value, i.e., less than zero, due to the size of the CV.

Table 32 Cont'd. Coefficients of Variance for Selected PS Items
Among New York Respondents

Cateogry of PS Items	LESA Totals		LESA Counts					
			CV		Variation at 95% C.L.		Range	
	Unweighted N	Weighted N	Relvariance	%	%	N	Minimum	Maximum
Var 204. Types of Instruction								
(1) Bilingual-Bicultural A	2	3,708	.471422	68.66	137.32	± 5,091	--*	8,799
(2) Bilingual-Bicultural B	0	0	0	0	0	0	0	0
(3) Bilingual	0	0	0	0	0	0	0	0
(4) English Language Instruction and Culture	10	30,993	.031643	17.79	35.58	± 11,026	19,966	42,019
(5) ESL	1	1,807	.921600	96.00	192.00	± 3,469	--*	5,277
(6) English Language Medium Instruction	26	88,062	.241795	49.17	98.35	± 86,605	1,457	174,668
(7) Not enrolled in school	0	0	0	0	0	0	0	0
(8) Did not qualify	107	346,678	.041754	20.43	40.87	±141,680	204,998	488,357
Var 206. Overagedness in Grade								
(1) Not overaged	121	410,355	.055584	23.58	47.15	±193,493	216,862	603,849
(2) Overaged	9	20,201	.333580	57.76	115.51	± 23,335	--*	43,536
11-12. Special Education:								
11a. Receives education for the handicapped	12	44,217	.502142	70.86	141.72	± 62,666	--*	106,882
11b. Receives diagnostic services	17	68,993	.210277	45.86	91.71	± 63,275	5,718	132,268
12a-d. Needs special provisions	77	220,908	.112336	33.52	67.03	±148,082	72,[illegible]26	368,989

*Determination of the lower confidence interval boundary resulted in a negative value, i.e., less than zero, due to the size of the CV.

Table 33. Coefficients of Variance for Selected PS Items
Among Remainder of U.S. Respondents

Cateogry of PS Items	LESA Totals		LESA Counts					
			CV		Variation at 95% C.L.		Range	
	Unweighted N	Weighted N	Relvariance	%	%	N	Minimum	Maximum
4. Grade repetition								
(1) At least one grade	54	81,516	.043229	20.79	41.58	± 33,897	47,619	115,413
(2) Part of a grade	3	4,000	.441197	66.42	132.85	± 5,314	--*	9,313
(3) Never repeated	269	476,511	.030343	17.42	34.84	±166,010	310,501	642,520
(4) No record	32	57,312	.074310	27.26	54.52	± 31,246	26,066	88,558
13e. English proficiency								
(1) Severely limited	13	21,776	.154373	39.29	78.58	± 17,112	4,664	38,888
(2) Very limited	33	62,128	.118578	34.44	68.87	± 42,788	19,340	104,915
(3) Slightly limited	45	85,376	.048815	22.09	44.19	± 37,726	47,650	123,103
(4) Adequate	94	161,664	.039574	19.89	39.79	± 64,320	97,344	225,984
(5) Very well	80	114,734	.045643	21.36	42.73	± 49,024	65,710	163,759
(6) Other	3	4,480	.408324	63.90	127.80	± 5,725	--*	10,205
16e. Reading achievement:								
(1) 1/2+ yr. above grade	40	75,421	.046766	21.63	43.25	± 32,620	42,801	108,041
(2) At grade level	114	227,835	.054216	23.28	46.57	±106,099	121,735	333,934
(3) 1/2-1 yr. below	73	133,476	.058255	24.14	48.27	± 64,432	69,044	197,907
(4) 1 yr. below	41	92,073	.026185	16.18	32.36	± 29,798	62,275	121,871
(5) Over 1 yr. below	110	195,535	.057841	24.05	48.10	± 94,053	101,482	289,588
17. Funding Sources								
17a(3). Federal programs: ESEA Title VII	28	62,340	.103379	32.15	64.31	± 40,088	22,252	102,427
17b(1). State programs: Bilingual	75	132,478	.063210	25.14	50.28	± 66,614	65,864	199,093
17c(1). Local programs: Bilingual	91	143,500	.119970	34.64	69.27	± 99,407	44,093	242,907

*Determination of the lower confidence interval boundary resulted in a negative value, i.e., less than zero, due to the size of the CV.

Table 33 Cont'd. Coefficients of Variance for Selected PS Items
Among Remainder of U.S. Respondents

Category of PS Items	LESA Totals		LESA Counts					
	Unweighted N	Weighted N	CV		Variation at 95% C.L.		Range	
			Relvariance	%	%	N	Minimum	Maximum
Var 204. Types of Instruction								
(1) Bilingual-Bicultural A	3	5,328	.576108	75.90	151.80	± 8,087	--*	13,415
(2) Bilingual-Bicultural B	0	0	0	0	0	0	0	0
(3) Bilingual	1	1,084	1.000000	100.00	200.00	± 2,167	--*	3,251
(4) English Language Instruction and Culture	17	22,964	.144272	37.98	75.97	± 17,445	5,519	40,409
(5) ESL	1	6,007	1.000000	100.00	200.00	± 12,014	--*	18,020
(6) English Language Medium Instruction	75	162,022	.054360	23.32	46.63	± 75,552	86,471	237,574
(7) Not enrolled in school	0	0	0	0	0	0	0	0
(8) Did not qualify	336	636,591	.019737	14.05	28.10	±178,866	457,725	815,457
Var 206. Overagedness in Grade								
(1) Not overaged	334	631,330	.021398	14.63	29.26	±184,702	446,628	816,031
(2) Overaged	44	73,390	.060722	24.64	49.28	± 36,169	37,221	109,559
11-12. Special Education:								
11a. Receives education for the handicapped	45	86,454	.046031	21.45	42.91	± 37,097	49,357	123,551
11b. Receives diagnostic services	48	86,379	.104287	32.29	64.59	± 55,789	30,589	142,168
12a-d. Needs special provisions			.044953	21.20	42.40	±139,031	188,[illegible]	466,902

*Determination of the lower confidence interval boundary resulted in a negative value, i.e., less than zero, due to the size of the CV.

6. PS File Documentation

6.1 Data Maps for Data Files

6.1.1 Modified SELECTED File

At the conclusion of the LESA count phase of the study, RDI provided NIE a SELECTED data file, consisting of data on every NELB child selected to be in the study. The data was from the Screener Questionnaire, the Household Questionnaire, and the LM&AI test. Demographic and identifying information was grouped at the beginning of each record. Questionnaire data was ordered according to the format of items on the instruments. The unique identification numbers used during the study were grouped with randomly assigned identification numbers.

RDI created a new master file and a PS analysis file to use in completing the PS analysis phase of the study. The new file was created by adding PS responses to the end of appropriate records on the SELECTED file. This SELECTED2 file also has reformatted descriptive information with an SMSA/nonSMSA code added. The random identification code number used on the first SELECTED file was applied so that each case had the same number as previously. The following information describes the format of the SELECTED2 file. It contains all 2,953 5 to 14 year old selected children. Some of these did not have PS data, in which case blank fill was used for PS responses.

Columns	No. of Columns	Item Description
		Identification Codes
Record 1		
1-5	5	PSU (Randomly assigned replacement for PSU)
6-9	4	Segment
10-13	4	Dwelling unit
14-15	2	Person number
16	1	Screener disposition code
17-18	2	LM&AI Test disposition code
19	1	Parental Consent Form and Pupil Survey disposition code
20	1	Year PS completed-1978 or 1979
21-22	2	School Code
23-24	2	Verified age
25	1	Verified sex (1=male, 2=female)
26	1	Verified language (1=Spanish 2=Other non-English)
27	1	Verified LESA code (1=LESA, 2=nonLESA)
28	1	SMSA code (1=SMSA, 0=nonSMSA)
29-33	5	$BSW^{(1)}$
34-43	10	$BSW^{(2)}$ (Screener non-response adjusted weight;F10.3 format)

Columns	No. of Columns	Item Description
		Identification Codes
44-53	10	BSW(3) (Household non-response adjusted weight; F10.3 format)
54-63	10	BCW(1) (Child subsampling adjusted weight; F10.3 format)
64-73	10	BCW(2) (LM&AI non-response adjusted weight; F10.3 format)
74-83	10	BCW(3) (SIE adjusted weight; F10.3 format)
84-93	10	BCW(4) (Pupil Survey non-response adjusted weight; F10.3 format)
94	1	Subpopulation code (1=California, 2=Texas, 3=New York, 4=Remainder)
95	1	Year structure built
96-97	2	AM or PM
98-99	2	Hour interview began*
100-101	2	Minute interview began
102	1	S-1
103-104	2	S-2
105-106	2	S-3 Box A
107-108	2	S-6
109-118	10	S-7, S-8
119	1	S-11
120	1	S-12
121-122	2	S-13 (Month)
123-124	2	S-13 (Day)
125-126	2	S-13 (Year)
127-128	2	S-14
129-130	2	S-15
131	1	S-16
132-133	2	S-17
134-135	2	S-18a
136-137	2	S-18b
138-139	2	S-18c
140	1	S-19
141-142	2	S-20
143	1	S-21
144	1	S-22
145	1	S-25
146-147	2	AM or PM*
148-149	2	Hour screener ended
150-151	2	Minute screener ended
152	1	S-26
153-154	2	S-27 (Month)
155-156	2	S-27 (Day)
157-158	2	S-27 (Year)
159	1	S-28
160	1	S-29

* All time variables were coded on a 24 hour format.

Columns	No. of Columns	Item Description
		Identification Codes
161-162	2	S-30
163-164	2	S-31
165	1	Household action - personal
166	1	Household action - personal
167	1	Household action - personal
168	1	Household action - telephone
169	1	Household action - telephone
170	1	Household action - telephone
171	1	Household action - letter
172	1	Household action - letter
173	1	Household action - letter
		Household Questionnaire Items
174-175	2	Hour interview began
176-177	2	Minute interview began
178-179	2	AM or PM
180	1	Number of children on this questionnaire
181	1	H-1
182	1	H-3
183	1	H-3a
184	1	H-4
185	1	H-5a
186	1	H-5b
187	1	H-5c
188	1	H-6a
189	1	H-6b
190	1	H-6c
191	1	H-6d
192	1	H-6e
193-194	2	H-7
195	1	H-8
196	1	Box B
197	1	H-9
198-199	2	H-10
200	1	H-11
201	1	H-12
202	1	H-13
203	1	H-14
204	1	H-15
205	1	H-16
206	1	H-17
207	1	H-18
208-209	2	Box C

Columns	No. of Columns	Item Description
		Household Questionnaire Items
210	1	H-19
211	1	H-20
212	1	H-21
213	1	H-22
214	1	Box D
215-216	2	H-23
217-218	2	H-24
219	1	Box Ea
220	1	Box Eb
221	1	H-25a
222	1	H-25b
223	1	H-25c
224	1	H-25d
225	1	H-25e
226	1	H-25f
227	1	H-25g
228	1	H-26a
229	1	H-26b
230	1	H-26c
231	1	H-27a
232	1	H-27b
233	1	H-27c
234	1	H-28
235-236	2	H-29
237	1	H-30a
238	1	H-30b
239	1	H-30c
240	1	H-30d
241	1	H-30e
242	1	H-30f
243	1	H-30g
244	1	H-31a
245	1	H-31b
246	1	H-31c
247	1	H-32a
248	1	H-32b
249	1	H-32c
250	1	H-33
251-252	2	H-34
253	1	H35-1
254	1	H35-2
255	1	H35-3
256	1	H35-4
257	1	H35-5
258	1	H35-6
259	1	H35-7
260	1	H35-8
261	1	H35-9
262	1	H36
263-264	2	Person Number of respondent

Columns	No. of Columns	Item Description
		Household Questionnaire Items
[illegible]266	2	Hour interview ended
267-268	2	Minute interview ended
269-270	2	AM or PM
		LM&AI Test Items
271-272	2	Month of child's birth
273-274	2	Day of child's birth
275-276	2	Year of child's birth
277	1	Sex
278-279	2	Age
280	1	Testing conditions (1=SAT, 2=UNSAT)
281-346	66	Test item responses*
347-348	2	Age level of test
349-351	3	LM&AI total scores prior to rescoring
352	1	LESA code prior to rescoring
353-355	3	New LM&AI total after rescoring**
		Pupil Survey Items
Record 2		
1-5	5	PSU (Random replacement)
6-9	4	Segment
10-13	4	Dwelling Unit
14-15	2	Person Number
16-17	2	1
18-19	2	2
20-21	2	3
22	1	4
23	1	5
24-25	2	6a
26-28	3	6b
29	1	7a-1
30-31	2	7a-2
32	1	7a-3
33	1	7a-4
34	1	7b-1
35-36	2	7b-2
37	1	7b-3
38	1	7b-4
39	1	7c-1

* Format varies for each test level, but the last 7 digits after the last test item are the test administrator's identification number.

** The LESA code after rescoring is on Record 1, Column 27.

Columns	No. of Columns	Item Description
		Pupil Survey Items
40-41	2	7c-2
42	1	7c-3
43	1	7c-4
44	1	8
45	1	9
46	1	10a
47-48	2	10a-1
49-50	2	10a-2
51	1	10a-3
52	1	10a-4
53	1	10a-5
54	1	10b
55-56	2	10b-1
57-58	2	10b-2
59	1	10b-3
60	1	10b-4
61	1	10b-5
62	1	10c
63-64	2	10c-1
65-66	2	10c-2
67	1	10c-3
68	1	10c-4
69	1	10c-5
70	1	10d
71-72	2	10d-1
73-74	2	10d-2
75	1	10d-3
76	1	10d-4
77	1	10d-5
78-79	2	Blank
80	1	PS line "1" on all cases
Record 3		
1-5	5	PSU (random replacement)
6-9	4	Segment
10-13	4	Dwelling Unit
14-15	2	Person Number
16	1	10e
17-18	2	10e-1
19-20	2	10e-2
21	1	10e-3
22	1	10e-4
23	1	10e-5
24	1	10f
25-26	2	10f-1
27-28	2	10f-2
29	1	10f-3

Columns	No. of Columns	Item Description
		Pupil Survey Items
30	1	10f-4
31	1	10f-5
32	1	11a-1
33	1	11a-2
34	1	11a-3
35	1	11a-4
36	1	11a-5
37	1	11b-1
38	1	11b-2
39	1	11b-3
40	1	11c-1
41	1	11c-2
42	1	11c-3
43	1	11d
44	1	11e
45	1	12a
46	1	12b
47	1	12c
48	1	12d
49	1	12e
50	1	13a
51	1	13b
52	1	13c-1
53	1	13c-2
54	1	13c-3
55	1	13c-4
56	1	13d
57	1	13e
58-61	4	13f
62	1	14a
63	1	14b
64	1	14c-1
65	1	14c-2
66	1	14c-3
67	1	14d
68	1	14e
69-72	4	14f
73	1	15a
74	1	15b
75	1	15c-1
76	1	15c-2
77	1	15c-3
78	1	15d
79	1	15e
80	1	PS line "2" on all cases

Columns	No. of Columns	Item Description
		Pupil Survey Items
Record 4		
1-5	5	PSU (random replacement)
6-9	4	Segment
10-13	4	Dwelling Unit
14-15	2	Person Number
16-19	4	15f
20	1	16a
21	1	16b
22-23	2	16c-1
24-25	2	16c-2
26-27	2	16c-3
28-29	2	16c-4
30-31	2	16c-5
32-33	2	16c-6
34-35	2	16d-1
36-37	2	16d-2
38	1	16e
39	1	16f-1
40	1	16f-2
41-42	2	17a-1
43-44	2	17a-2
45-46	2	17a-3
47-48	2	17a-4
49-50	2	17a-5
51-52	2	17a-6
53	1	17b-1
54	1	17b-2
55	1	17b-3
56	1	17c-1
57	1	17c-2
58	1	17c-3
59-79	21	Blank
80	1	PS line "3" on all cases

6.1.2 PS Analysis File (PSA)

RDI created a smaller data file for processing PS responses more efficiently. The PSA file contains PS data and needed descriptive characteristics for the 989 5 to 14 year old children with both completed LM&AI tests and Pupil Surveys. The file includes cases from California, Texas, New York and the Remainder of the U.S. Pupil Survey data for 15 to 18 year olds may be found only on the SELECTED2-file. The open-ended PS items have been recoded. The primary distinction between the SELECTED2 and PSA files is that the PSA file contains binary items representative of the multiple response survey questions and the variables created for the analysis of the NIE recommendations. The following describes the format of the PSA file.

Columns	No. of Columns	Item Description
		Pupil Survey Items
Record 1		
1-5	5	PSU (Random replacement)
6-9	4	Segment
10-13	4	Dwelling Unit
14-15	2	Person Number
16-17	2	1
18-19	2	2
20-21	2	3
22	1	4
23	1	5
24-25	2	6a
26-28	3	6b
29	1	7a-1
30-31	2	7a-2
32	1	7a-3
33	1	7a-4
34	1	7b-1
35-36	2	7b-2
37	1	7b-3
38	1	7b-4
39	1	7c-1
40-41	2	7c-2
42	1	7c-3
43	1	7c-4
44	1	8
45	1	9
46	1	10a
47-48	2	10a-1
49-50	2	10a-2
51	1	10a-3
52	1	10a-4

Columns	No. of Columns	Item Description
		Pupil Survey Items
53	1	10a-5
54	1	10b
55-56	2	10b-1
57-58	2	10b-2
59	1	10b-3
60	1	10b-4
61	1	10b-5
62	1	10c
63-64	2	10c-1
65-66	2	10c-2
67	1	10c-3
68	1	10c-4
69	1	10c-5
70	1	10d
71-72	2	10d-1
73-74	2	10d-2
75	1	10d-3
76	1	10d-4
77	1	10d-5
78-79	2	Blank
80	1	PS line "1" on all cases
Record 2		
1-5	5	PSU (random replacement)
6-9	4	Segment
10-13	4	Dwelling Unit
14-15	2	Person Number
16	1	10e
17-18	2	10e-1
19-20	2	10e-2
21	1	10e-3
22	1	10e-4
23	1	10e-5
24	1	10f
25-26	2	10f-1
27-28	2	10f-2
29	1	10f-3
30	1	10f-4
31	1	10f-5
32	1	11a-1
33	1	11a-2
34	1	11a-3
35	1	11a-4
36	1	11a-5
37	1	11b-1
38	1	11b-2
39	1	11b-3

Columns	No. of Columns	Item Description
		Pupil Survey Items
40	1	11c-1
41	1	11c-2
42	1	11c-3
43	1	11d
44	1	11e
45	1	12a
46	1	12b
47	1	12c
48	1	12d
49	1	12e
50	1	13a
51	1	13b
52	1	13c-1
53	1	13c-2
54	1	13c-3
55	1	13c-4
56	1	13d
57	1	13e
58-61	4	13f
62	1	14a
63	1	14b
64	1	14c-1
65	1	14c-2
66	1	14c-3
67	1	14d
68	1	14e
69-72	4	14f
73	1	15a
74	1	15b
75	1	15c-1
76	1	15c-2
77	1	15c-3
78	1	15d
79	1	15e
80	1	PS line "2" on all cases
Record 3		
1-5	5	PSU (random replacement)
6-9	4	Segment
10-13	4	Dwelling Unit
14-15	2	Person Number
16-19	4	15f
20	1	16a
21	1	16b
22-23	2	16c-1
24-25	2	16c-2
26-27	2	16c-3

Columns	No. of Columns	Item Description
		Pupil Survey Items
28-29	2	16c-4
30-31	2	16c-5
32-33	2	16c-6
34-35	2	16d-1
36-37	2	16d-2
38	1	16e
39	1	16f-1
40	1	16f-2
41-42	2	17a-1
43-44	2	17a-2
45-46	2	17a-3
47-48	2	17a-4
49-50	2	17a-5
51-52	2	17a-6
53	1	17b-1
54	1	17b-2
55	1	17b-3
56	1	17c-1
57	1	17c-2
58	1	17c-3
59-79	21	Blank
80	1	PS line "3" on all cases
Record 4		
1-5	5	PSU (randomly assigned)
6-9	4	Segment
10-13	4	Dwelling Unit
14-15	2	Person Number
16	1	11a(1)
17	1	11a(2)
18	1	11a(3)
19	1	11a(4)
20	1	11a(5)
21	1	11a(6)
22	1	11b(1)
23	1	11b(2)
24	1	11b(3)
25	1	11b(4)
26	1	11c(1)
27	1	11c(2)
28	1	11c(3)
29	1	11c(4)
30	1	11c(5)
31	1	13c(1)
32	1	13c(2)
33	1	13c(3)
34	1	13c(4)

Columns	No. of Columns	Item Description
		Pupil Survey Items
35	1	13c(5)
36	1	14c(1)
37	1	14c(2)
38	1	14c(3)
39	1	14c(4)
40	1	14c(5)
41	1	15c(1)
42	1	15c(2)
43	1	15c(3)
44	1	15c(4)
45	1	15c(5)
46	1	16c(1)
47	1	16c(2)
48	1	16c(3)
49	1	16c(4)
50	1	16d(1)
51	1	16d(2)
52	1	16d(3)
53	1	16d(4)
54	1	16f(1)
55	1	16f(2)
56	1	16f(3)
57	1	16f(4)
58	1	17a(01)
59	1	17a(02)
60	1	17a(03)
61	1	17a(04)
62	1	17a(05)
63	1	17a(06)
64	1	17a(07)
65	1	17a(08)
66	1	17a(09)
67	1	17a(10)
68	1	17a(11)
69	1	17a(12)
70	1	17a(13)
71	1	17b(1)
72	1	17b(2)
73	1	17c(1)
74	1	17c(2)
75-79	5	Blank
80	1	Line "4" on all cases

Columns	No. of Columns	Item Description
		Pupil Survey Items
Record 5		
1-5	5	PSU (randomly assigned)
6-9	4	Segment
10-13	4	Dwelling Unit
14-15	2	Person Number
16-17	2	Program Type
18	1	10a-1 (grouped)
19	1	10b-1 (grouped)
20	1	10c-1 (grouped)
21	1	10d-1 (grouped)
22	1	10e-1 (grouped)
23	1	10f-1 (grouped)
24	1	7a-2 (grouped)
25	1	7b-2 (grouped)
26	1	7c-2 (grouped)
27	1	10a-3 (grouped)
28	1	10b-3 (grouped)
29	1	10c-3 (grouped)
30	1	10d-3 (grouped)
31	1	10e-3 (grouped)
32	1	10f-3 (grouped)
33	1	7a-3 (grouped)
34	1	7b-3 (grouped)
35	1	7c-3 (grouped)
36	1	Type of Instruction
37	1	16e (grouped)
38	1	Overage for grade
39	1	4 (grouped)
40	1	11a (1st - 5th)
41	1	11b (1st - 3th)
42	1	12a-12d
43	1	Age group
44	1	Language group
45	1	LESA code
46-55	10	$BCW^{(4)}$ (Pupil Survey non-response adjusted weight; F10.3 format)
56-79	24	Blank
80	1	Line "5" on all cases

6.2 Procedure Files

6.2.1 Computing PS Non-Response Weights - Program BCW04

RDI developed four Fortran programs to make five successive adjustments to the sampling weights for estimating totals and proportions of NELB and LESA children. At each stage of adjustment, a new set of weights was derived by multiplying each weight by an appropriate adjustment factor. The resultant weights were then modified in a similar manner, applying another set of adjustment factors to compute the next weights, until five successive sets of adjusted weights were produced. All four programs applied adjustment factors in this way and attached the resultant weights to appropriate records on a master data file. Names of the adjustments made, the computer programs used to make them, the weights to which adjustment factors were applied, and the resultant weights are shown in the following table. (See Volume III of the RDI LESA count report (January, 1979) for a discussion of the weights.)

Table 34. Relationship of Weight Adjustments to Computer Programs

Adjustment	Weight Adjusted	Resultant Adjusted Weight	Computer Program
1. Screener Questionnaire non-response	$BSW^{(1)}$	$BSW^{(2)}$	BSW03
2. Household Questionnaire non-response	$BSW^{(2)}$	$BSW^{(3)}$	BSW03
3. Child subsampling	$BSW^{(3)}$	$BCW^{(1)}$	BCW01
4. LM&AI test non-response (for 5-14 year olds only)	$BCW^{(1)}$	$BCW^{(2)}$	BCW02
5. Age, sex, and language distribution (to the SIE)	$BCW^{(1)}$ or $BCW^{(2)}$	$BCW^{(3)}$	BCW03
6. Pupil Survey non-response	$BCW^{(3)}$	$BCW^{(4)}$	BCW04

Table 34 indicates that the final weight adjustment (line 6) was for the Pupil Survey non-response and created the final $BCW^{(4)}$ for 5 to 14 year old children with completed PS forms. The following describes program BCW04, the input and output files used, and the arrays used in computations.

I/O FILES

File Name	Description
TAPE 1 (input)	The master data file of selected 5 to 18 year old children.
TAPE 2 (output)	An updated master file with $BCW^{(4)}$ values attached.
TAPE 3 (output)	A report file containing the adjustment ratios computed.

MAJOR ARRAYS AND VARIABLES

Array Name (Size)	Description
RECORD (65)	Data from the master file to be carried and written on the updated file.
RAT (4, 4)	Group adjustment ratios for computing $BCW^{(4)}$.
RATTOP (4, 4)	Group sums of weighted segment frequency sums used as the numerators of ratios comprising the adjustment factors.
RATBOT (4, 4)	Group sums of weighted segment sums used as the denominators of ratios comprising the adjustment factors.
SPOP	1-digit code for subpopulation.
DEN	1-digit code from 1 to 8 for density for the segment to which the child belonged.
SMSA	1-digit code for all segments, where 1 = SMSA and 2 = non-SMSA.
PSU	5-digit county identification codes where the leftmost digit indicated subpopulation.
SEG	3-digit code identifying segments within counties, where the rightmost digit in each represented expected density of NELB households in the segment (Note: codes 1 to 4 were grouped as low density and 5 to 8 as high density segments).

MAJOR ARRAYS AND VARIABLES

Array Name (Size)	Description
PSD	1-digit code indicating response disposition on the Pupil Survey.
ASLWT	The last child weight, $BCW^{(3)}$.
LAID	2-digit code indicating response disposition on the LM6AI test, where codes 1 and 4 indicated children with LESA/nonLESA classification.

6.2.2 Creating the PS Analysis Variables - Program REC

Program REC was written to recode the open-ended items on the Pupil Survey and create new variables needed for the recommended analyses. The subroutines in the program address the five NIE analysis recommendations separately. The program created two data files, one an update of the master file and one containing only cases with completed PS forms. The following identifies the I/O files and the principal variables.

I/O FILES

File Name	Description
TAPE 1 (input)	The file of all selected children, with edited PS data attached to appropriate child records.
TAPE 2 (output)	The updated master file of selected cases with recoded PS items.
TAPE 3 (output)	The file of only 5 to 14 year old children with completed PS forms, with recoded PS items and new PS analysis variables.
TAPE 4 (output)	A report file of the number of records written out.

MAJOR ARRAYS AND VARIABLES

Array Name (Size)	Description
MF (37)	Data input from the master file written onto the updated master file.
KCN (5)	Card numbers 1 to 5 for PS output.
LX (4)	The last child weight ($BCW^{(3)}$), the LESA/nonLESA code, age and language group (1 = Spanish and 2 = Other).
KD (2)	The unique PSU-SEG-DU-PN identification number.
K99 (12)	Item numbers of 12 items on instruction time where "99" needed to be recoded as "0".

MAJOR ARRAYS AND VARIABLES

Array Name (Size)	Description
K (125)	The original PS items as printed on the PS form.
M (59)	The 59 items with multiple responses recoded as binary variables.
TIME (9)	The nine instructional time PS items examined in analysis Recommendation 3.
STAFF (9)	The nine level of staff PS items examined in analysis Recommendation 3.
NEED (6)	The six items used to measure need and receipt of services in analysis Recommendation 6.
OVERAGE	The variable created in Recommendation 6 to compare grade and expected age.
EDH	PS items used in Recommendation 6 to measure educational services for the handicapped.
DIAG	PS items used in Recommendation 6 to measure diagnostic services.
PROV	PS items used in Recommendation 6 to measure need for services.
AGE2	Age recoded where 1 = 5 to 8 and 2 = 9 to 14.
LAID	Disposition code indicating completed LM&AI test.
PAT	The variable needed in Recommendation 2 indicating program type and the 34 patterns within types.
TYPE	The variable needed in Recommendation 4 indicating type of instruction.
REC2	The subroutine to create variables for Recommendation 2.
REC3	The subroutine to create variables for Recommendation 3.

MAJOR ARRAYS AND VARIABLES

Array Name (Size)	Description
[redacted]	The subroutine to create variables for Recommendation 4.
REC6	The subroutine to create variables for Recommendation 6.

6.2.3 Modifying Coefficients of Variance Input Procedures

RDI developed two Fortran programs, CVSEG and CV, to implement the procedures for estimation of variance delineated by Westat's paper on weights and estimation procedures (see RDI's Volume II Report, January, 1979). Program CVSEG reads data and identification information from the master data file of selected children and reduces those data to the segment level. The segment level data, with segment-identifying information, are stored on tape. Program CV reads the segment level tape and computes estimations of totals and proportions and coefficients of variance.

The two programs were modified so that PS analysis variables could be addressed in the CV computations. The modifications constituted changing input and output formats and dimensioning arrays to accommodate more variables. An overview of each program and a listing of the Fortran code follows. Each overview outlines the programming steps used to implement the Westat procedures. The I/O files are then described, followed by information on the major arrays and variables in the program. Comment statements in the Fortran code listings mark major section of the program and indicate the functions of subprograms.

Program PSEG reads data for each child record on the data file of selected children with PS data. Only data for 5 to 14 year old children with complete PS forms were read and processed. The 989 children had LESA, age, and language codes showing that they were classified as LESA or nonLESA, were 5 to 14 years of age, and had a non-English language background. For each of the NELB children, 34 binary values were computed from selected PS item responses. Each binary value indicated which of 34 source specified characteristics a given child possessed, where "1" indicated possession of the characteristic and "0" indicated lack of the characteristic.

The characteristic values were multiplied by the child's BCW[4] value and summed for children in each segment to form segment level sums of weighted source specified characteristic values. The totals and segment identification were stored on an intermediate tape for input to program PSCV, the modified CV program to compute CVs for the PS analysis.

Program PSCV reads segment level data and identification codes from the intermediate data tape written by program PSEG. Estimates of totals and coefficients of variance for the frequencies are then computed. Statistics were computed for the 34 source specified characteristics for the study's four strata (California, Texas, New York, and the Remainder of the U.S.) and for the whole U.S. but only New York and the Remainder of the U.S. had sufficient response rates to be reported. The computational process is divided into six stages, each identified separately below. The computation process is discussed in RDI's Volume III LESA count report (January, 1979). The following files and variables were used in the program.

PROGRAM PSEG I/O FILES

File Name	Description
TAPE 1 (input)	The master data file for selected chidren
TAPE 2 (output)	An intermediate file of segment level data for input to program CV
TAPE 3 (output)	A report file containing both child level and segment level information

PROGRAM PSEG MAJOR ARRAYS AND VARIABLES

Array Name (Size)	Description
P (40,2)	Binary (1, 0) source specified characteristic values for a given child
S (40,2)	Totals, for a given segment, of the weighted values for all children in that segment
PSU, SEG, DU, PN	County, segment, household, and child indentifation codes
AGE	Age in years for each child
LANG	A language code where "1" indicates Spanish non-English language background and "2) indicates other non-English language background
LESA	A limited English-speaking ability code where "1" indicates LESA and "2" indicated nonLESA
WT	The $BCW^{(4)}$ value for a given child
V (213)	The 213 PS items and variables
NP, NS, NPS, NSC	Counters where: NP counts children; NS counts segments; NPS counts children within a segment; and NSC counts segments within a county
NX	The number of X or Y characteristics, i.e., set to 35 for the 35 source specified characteristics requested in the PS analysis

PROGRAM PSCV I/O FILES

File Name	Description
TAPE 1 (input)	Contains codes and index values for directory arrays
TAPE 2 (input)	Segment data file produced by program PSEG
TAPE 3 (output)	Contains the output reporting information on computations

PROGRAM PSCV MAJOR ARRAYS AND VARIABLES

Array Name (Size)	Description
KCD(3,75)	Directory information for the 75 counties in the study where: row 1 contains PSU codes (KC); row 2 contains group index numbers (LG); and row 3 contains zeros for Certainty counties and index numbers (LNCC) for Non-certainty counties
NCCD(51)	Non-certainty group index numbers (LNCG) for the 51 Non-certainty counties
KGD(39)	Subpopulation index numbers (LSP) for the 39 groups
NCGD(15)	Group index numbers (LG) for the 15 Non-certainty groups
NSCC(24)	Number of segments for each of the 24 Certainty counties, according to the sample design
KFNCC(51)	Flags to indicate which of the 51 Non-certainty counties actually have data on the TAPE 2 input file
S(15,2)*	Totals (sums of weighted source characteristic values) for a given segment
Ø(15,2)*	"Odd county" totals for a given Certainty county
E(15,2)*	"Even county" totals for a given Certainty county
C(15,2,51)*	Totals for the 51 Non-certainty counties

* In each array, column 1 contains X(NELB) values and column 2 contains Y(LESA) values.

PROGRAM PSCV MAJOR ARRAYS AND VARIABLES

Array Name (Size)	Description
A(15,2,15)*	Group means of county totals for the 15 Non-certainty groups
N(15)	Counts of the actual numbers of counties with data in each of the 15 Non-certainty groups
D(15,3,39)*	Variances and covariances for all 39 groups, where column 3 is for XY covariances
X(15,3,5)*	Totals and proportions for the four strata (California, Texas, New York, and the Remainder of the U.S.) and the nation, where column 3 is for Y/X proportions and slices one to four are for subpopulations and slice five is for the whole U.S.
V(15,3,5)*	Variances and covariances for the four strata and the nation, where column 3 is for Y/X proportions and slices one to four are for subpopulations and slice five is for the whole U.S.
RV(15,3,5)*	Relvariances for totals and proportions for the four strata and the nation, where column 3 is for Y/X proportions and slices one to four are for subpopulations and slice five is for the whole U.S.
NS	Count of all segments
NSC	Count of segments within a given county
NCC	Count of all Certainty counties
NNCC	Count of all Non-certainty counties
KS	Segment number
NX	The number of X source specified characteristics; the number of Y source specified characteristics; and, since every X characteristic has a corresponding Y characteristics,of number of SY pairs, i.e., set to 35 for the 35 source specified characteristics requested in the PS data analysis

* In each array, column 1 contains X(NELB) values and column 2 contains Y(LESA) values.

7. Tape Specifications

7.1 Physical Characteristics

RDI prepared the data tape to submit as documentation of the CESS survey responses. Since all of the data entry and processing was done through Control Data Corporation, the data tape is written in standard CDC format. The physical characteristics of CDC data tapes are discussed in the CDC reference manual, NOS Computing Service Reference Set, Vol. 3, Comprehensive Usage, Chapter 10, 1978. The following characteristics were used to write the CESS data tape:*

(1) 9-track
(2) 1600 bpi density
(3) Not labeled
(4) EBCDIC Conversion Code
(5) CDCs "x" format (external)
Where:

Mode	Binary
Block size (PRU size)	Actual data block size can range from 0 to 512_{10} (1000_8) central memory words. This block must appear in exact multiples of central memory words.
Logical end-of-record	Any block containing fewer than 512_{10} central memory words represents a logical end-of-record. If a logical record consists of an exact multiple of 512_{10} words, the block that denotes the logical end-of-record consists solely of a block terminator.
Logical end-of-file	Tape mark
Logical end-of-information	None
End-of reel	During a write operation, if the system senses the end-of-tape (EOT), it re-writes the block in which the EOT appeared as the first block on the following reel. No trailer information is written on the current reel. During a read operation, the block in which the EOT appears is ignored and reading continues on the next reel. If tape mark and the EOT are sensed at the same time, the EOT is ignored.

*It is possible that the CESS data tape will be converted to IBM format for submission to NIE. In this event, RDI and LM&A will provide the parameters under which the IBM tape was written.

Noise	Any block containing fewer than six frames on 9-track tapes is considered to be noise and is ignored.
Special Considerations	X-formatted tapes cannot be labeled and all 9-track tapes are written in an even multiple of bytes.

7.2 Order of Files

The data tape provided contains two files. The first, identified as the SELECTED2 file, is the same as the SELECTED file submitted with RDI's LESA count report in January, 1979, except that completed PS forms have been appended to appropriate child records. It contains Screener, Household Questionnaire, LM&AI test, and PS data for selected 5 to 18 year old NELB children. There are 2,953 cases on the file, each with four records of data. The unique identification numbers have been replaced with random identification numbers. The data map for the SELECTED2 file may be found in Section 6.1.1.

The second file on the tape is the PSA or Pupil Survey Analysis file. Containing data for 989 cases, the PSA file contains data on 5 to 14 year old selected children with completed LM&AI tests and PS forms. The open-ended PS items have been recoded, multiple response items have been reformatted as binary variables, new variables needed for the analyses have been added, and the PS non-response weights have been added for cases from New York and the Remainder of the U.S. Identification numbers were randomized.

Procedure files were not included on the data tape. Restrictions on government knowledge of confidential identification codes (specifically PSU numbers) prohibits the application of the software as currently written to the SELECTED2 or PSA data files with randomly assigned numbers to replace PSU numbers. The procedure files could be modified to use the data files on the tape but the task was not included in project activities. The procedure files used in data analysis are documented in section 6. The Fortran code for each procedure file is provided.

APPENDIX A

Open Ended Item Responses

APPENDIX A

Open Ended Item Responses

The following provides a list of the comments obtained to "other" or "please clarify" responses to PS items. The item number and the question as it appears in the PS is provided.

Q5 What was the primary reason for this student's most recent repetition of a grade, part of a grade, or a course?

- Absence from school
- Grades low
- Lack of interest, application
- Insufficient credits
- Age and maturity
- Mentally handicapped, learning disability, E.M.R.

Q7a-3 (Instruction in the English language.) Who primarily provides this instruction?

- Teacher aide

Q7a-4 (Instruction in the English language.) Under what circumstances is this instruction normally provided?

- Both large and small groups
- Different size groups depending on need or circumstances
- Departmental class, students change classes
- Special instruction in learning disabilities
- Team teaching situation

Q7b-3 (Remedial or Corrective Instruction.) Who primarily provides this instruction?

- One-half professional and one-half paraprofessional
- System 80 equipment
- Student tutor
- Classroom aide (Title I)

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Q7b-4 (Remedial or Corrective Instruction.) Under what circumstances is this instruction normally provided?

Both large and small groups
Different size groups depending on need or circumstances
College bound

Q7c-3 (English as a second language.) Who primarily provides this instruction?

Student tutor
Both professional and paraprofessional

Q7c-4 (English as a second language.) Under what circumstances is this instruction normally provided?

Both large and small groups
Different size groups depending on need or circumstances
Departmentalized classes, students change classes

Q9 Does this student receive any instruction through the English language in the culture or heritage associated with the non-English language of his or her background?

Yes, on special occasions:
Spanish history
Informal activities and conversation
Appropriate holidays

Q10a-3 (Non-English language arts.) Who primarily provides this instruction in this student's non-English language?

Other, unspecified

Q10a-4 (Non-English language arts.) Under what circumstances is this instruction normally provided?

Both large and small groups
Different size groups depnding on need or circumstances
Departmentalized classes, students change classes

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Q10a-5 Please select the response that best describes the composition of the class or group in which this student received this instruction through the student's non-English language.

Italian

Q10b-3 (Social studies or social science.) Who primarily provides this instruction in this student's non-English language?

Other, unspecified

Q10b-4 (Social studies or social science.) Under what circumstances is this instruction normally provided?

Both large and small groups
Departmentalized classes, students change classes

Q10b-5 (Social studies or social science.) Please select the response that best describes the composition of the class or group in which this student receives this instruction through the student's non-English language.

Other, unspecified

Q10c-3 (Mathematics.) Who primarily provides this instruction in this student's non-English language?

No "other" responses

Q10c-4 (Mathematics.) Under what circumstances is this instruction normally provided?

Departmentalized classes, students change classes

Q10c-5 (Mathematics.) Please select the response that best describes the composition of the class or group in which this student receives this instruction through the student's non-English language.

No "other" responses

APPENDIX A

Q10[illegible]-3 (Science.) Who primarily provides this instruction in this student's non-English language?

No "other" responses

Q10d-4 (Science.) Under what circumstances is this instruction normally provided?

Departmentalized classes

Q10d-5 (Science.) Please select the response that best describes the composition of the class or group in which this student received this instruction through the student's non-English language.

No "other" responses given

Q10e-3 (Non-English language culture.) Who primarily provides this instruction in this student's non-English language?

Both professionals and paraprofessionals
Other, unspecified

Q10e-4 (Non-English language culture.) Under what circumstances is this instruction normally provided?

Different size groups depending on need or circumstance
Departmentalized classes, students change classes

Q10e-5 (Non-English language culture.) Please select the response that best describes the composition of the class or group in which this student receives this instruction through the student's non-English language.

Other, unspecified

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Q10f Does this student receive instruction through the non-English language associated with his or her background in any subject area that has not been mentioned?

Yes, describe the subject:
- Music
- Art, exploratory arts
- Health
- Physical education, gym
- Safety, driver's education
- Writing
- Basic skills
- Reading in Spanish
- Number readiness
- Penmanship
- Cultural language class (Japanese)

Q10f-3 (Other subject areas.) Who primarily provides this instruction in this student's non-English language?

No "other" responses

Q10f-4 (Other subject areas.) Under what circumstances is this instruction normally provided?

Different size groups depending on need or circumstances

Q10f-5 (Other subject areas.) Please select the response that best describes the composition of the class or group in which this student receives this instruction through the student's non-English language.

Other, unspecified

APPENDIX A

Q11c Is this student receiving any of the following special services? Other.

Reading laboratory
Remedial reading
Special reading group
Reading diagnosis and placement
Title I, reading program, corrective reading
Miller-Unruh Remedial Reading
Remedial math
Math laboratory
Speech, speech therapy
Special education
Hearing test, hearing special education
Testing for visual and auditory perceptual ability
Prescription learning
Mainstream
Kindergarten physical
Early Childhood Education (ECE)
Bilingual instructions
Achievement test
Tutoring after classes
Title I, language arts
Compensatory education participant
Resource Room, Title I OLSH
Violin instruction and chorus
School Social Worker
Motorcycle accident

Q11e (Special Services.) Who primarily provides these services in this student's non-English language?

Other, unspecified

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Q12e Are any other special provisions made for this student because of his or her non-English language background?

Spanish cultural classes
Bilingual classes
Spanish
Title VII
Title I
LAB
Migrant programs
ESOL Program
Teacher aid, Spanish
Trained teacher bilingual classroom
Learning center, teach to speak Spanish
Vocabulary
TBBS program
Teacher advising
Paraprofessional works with students in reviewing English
Student tutor
Remedial reading
Summer classes, enrichment
College Bound
State Compensatory Education
Special motivation and training program
Special education for communication disorder
Geometry
Parent questionnaire

Q13b (Assessment of English language proficiency.) Which students are assessed?

Only some students selected on the following criteria:

Apparent language problems
Those below grade level
Referrals
Immigrant children only
Specific grades (all students every few years)
Children who use other languages
Those below criteria on a specific test/evaluation, LAB test scores in Spanish and English
All students
Spanish surnames only
Non-independent or intermediate students
Home language survey responses

APPENDIX A

Q13a (Assessment of English Language Proficiency.) Which of the following are used during this assessment?

Non-teacher professional observation or interview
LAB tests
Standardized test prepared by test publisher in non-English language
Other tests - origin not known
CTBS
San Diego Observation Assessment Instrument
BCRMD Test
P.P.V.T.
State Assessment, State test
Foreign language survey prepared by school district
Oral language assessment by bilingual teachers
Parent questionnaire, language survey, home language survey
State and Federal Bilingual Census of 1977-78

Q13e (Assessment of English Language Proficiency.) Please select the response that best describes the way this student has been classified as a result of the assessment.

Limited proficiency (degree of limitation not stated in English)
Emotional and physical disability
Results not received
Bilingual
Do not know

Q14b (Assessment of Language Dominance.) Which students are assessed?

Only some students, using the following criteria:
Referrals
Children who use other languages
Those below criteria on a specific test/evaluation
Those below grade level
Immigrant children only
Independent or intermediate students
Students dominant in non-English language
All students

APPENDIX A

Q14c (Assessment of Language Dominance.) Which of the following are used during this assessment?

- Non-teacher professional observation or interview
- NYC Language Assessment Battery
- Aspira LAB Tests, LAB English and Spanish
- San Diego Language Assessment Test
- BCRMD Test
- SAT
- Oral language assessment by bilingual teacher
- Language facility test
- Dade County Test of Language Development
- Oral comprehension
- Special assessment test
- Other tests - origin not known
- Standardized test prepared by test publisher in non-English language
- Parent survey, parent/home language survey
- Home and school surveys
- Parent request
- State and Federal Bilingual Census for 1977-78

Q14e (Assessment of Language Dominance.) Please select the response that best describes the way this student has been classified as a result of the assessment.

- Results not received, do not know
- Limited English speaking

Q15b (Assessment of Non-English Language Proficiency.) Which students are assessed?

Only some students using the following criteria:

- Apparent language problems
- Children who use other languages
- Those below criteria on a specific test/evaluation
- Those below grade level
- Referrals
- Pass English test

APPENDIX A

Q15c (Assessment of Non-English Language Proficiency.) Which of the following are used during this assessment?

- Non-teacher
- NYC Language Assessment Battery
- BCRMD Test
- SAT
- LAB English and Spanish
- San Diego Observation Assessment Instrument
- Other tests - origin not known
- Standardized test prepared by test publisher in non-English language
- Parent language survey
- State and Federal Bilingual Census of 1977-78

Q15e (Assessment of Non-English Language Proficiency.) Please select the response that best describes the way this student has been classified as a result of the assessment.

- Limited proficiency (degree of limitation not stated in English)
- Results not received, do not know
- Non-Spanish speaker
- Bilingual
- Limited English speaking

Q16b Was this student exempted from standardized testing?

Reasons for exemptions:

- Apparent language problems
- Below grade level
- Only specific grades tested every few years
- Below criteria on a specific test/evaluation
- Absent
- Tester not available

APPENDIX A

Q16c Please indicate all of the areas on which this student was tested with an English language standardized test.

Specified test mentioned
IQ
LAB
Metropolitan
CTB
SESAT
TOBE
Readiness Testing (Gates-MacGintie)
Basic concepts
Kindergarten readiness concepts
Reference skills
Stanford Achievement test
Iowa Basic Skill Battery
Otis-Lennon Mental Ability Test
Bettye Caldwell Test
Language arts/English
Listening
Vocabulary
Writing
Spelling
Speech
Social studies
Science
Environment science
Health science

Q16d Please indicate all the areas on which this student was tested with a non-English language standardized test.

Specific test mentioned
IQ
LAB
Readiness Testing (Gates-MacGintie)
Kindergarten readiness concepts
Bettye Caldwell Test
Language arts/English
Listening
Vocabulary
Writing
Speech
Social Studies

APPENDIX A

Q16f (Use of Standardized Tests.) The basis for the response selected in 16e above was:

Other professional observation or interview
Stanford Diagnostic test results
Peabody Picture Vocabulary Test results
LAB test results
Do not know the basis

Q17a (Sources of funding.) Federal support.

Title IV or IVB
PL 89-10
College Bound
Johnson-O'Malley
ECE
Operation Math/Success
S.E.E.
Title IV - Textbooks
Refugee
CODOFIL
ESEA Title XIII
TU Read
CETA
TBBS
Project SMILE (pre-kindergarten)
Title III-ESEA
Mile Reading - EDY
SIP - Language learning disability classes
AB 90

Q17b (Sources of funding.) State Programs.

State bilingual program
Food program
Books
Transportation
Comprehensive reading program
College Bound
EDY
Title IV-B
PSEN
ECE
CODOFIL
State compensatory education
Gifted

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Intermediate unit
Oral language and speech development
Miller Unruen
MGM
State preschool
AB 1329, AB 65, and SB 90
Special education
Limited English speakers
Home economics vocational

Q17c (Sources of funding.) Local Programs.

Food program
Chacon
Tax levy
CODOFIL
Reading program
Aspira mandated classes
Area vocational center
PS 481
Essex County Welfare Department
Multi-cultural programs
Lessons given by media specialist
College Bound

APPENDIX B

Recoding Item Responses and Creating New Variables

APPENDIX B

Recoding Item Responses and Creating New Variables

I. Recoding Item Responses

The following changes were made in item codes from those printed on the PS form. Refer to the open-ended item coding system for clarification of recodes as "other" responses.

Item Number	Recoded Response	Code As Printed on PS	New Code
2	Pre-Kindergarten	21	-1
	Kindergarten	22	0
	Other	88	14
	No response	blank,0	99
3	Kindergarten	22	0
	Other	88	14
	No response	blank,0	99
5	Do not know	8	4
9	Do not know (became part of "other")	6	4
12e	Do not know	1	3
17a(1-13)	No	2	blank
	Don't know	8	blank
17b(1-2)	No	2	blank
	Don't know	8	blank
17c(1-2)	No	2	blank
	Don't know	8	blank

APPENDIX B

II. Creation of New Variables

The following binary variables were created from PS items where more than one answer was allowed. A binary variable was made for each response printed on the PS form for each of the multiple answer items. This created 59 new variables; where a "1" indicated the alternative was checked and a "0" indicated the alternative was not checked.

Item Number	Response Alternative	Multiple Answer Variable Number
11a.	Special education services for:	
	1...Mental retardation	1
	2...Learning disabilities	2
	3...Physical disabilities	3
	4...Speech impairments	4
	5...Social or emotional handicaps	5
	6...No services received by this student	6
11b.	Diagnostic services for:	
	1...Visual impairments	7
	2...Auditory impairments	8
	3...Other physical impairments	9
	4...No services received by this student	10
11c.	Other:	
	1...Guidance and counseling	11
	2...Psychological testing and referral services	12
	3...Mentally gifted and talented programs	13
	4...Other	14
	5...No services received by this student	15

APPENDIX B

Item Number	Response Alternative	Multiple Answer Variable Number
13c.	(Assessment of English language proficiency). Which of the following were used during this assessment?	
	1...Standardized tests prepared by a test publisher in the English language	16
	2...Standardized tests that have been translated into a non-English language by school district personnel	17
	3...Other locally developed or teacher developed tests	18
	4...Teacher observations	19
	5...Other	20
14c.	(Assessment of language dominance). Which of the following were used during this assessment?	
	1...Standardized tests prepared by a test publisher in the English or a non-English language	21
	2...Standardized tests that have been translated into a non-English language by school district personnel	22
	3...Other locally developed or teacher developed tests	23
	4...Teacher observations	24
	5...Other	25
15c.	(Assessment of Non-English language proficiency). Which of the following were used during this assessment?	
	1...Standardized tests prepared by a test publisher in the English or a non-English language	26

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Item Number	Response Alternative	Multiple Answer Variable Number
	2...Standardized tests that have been translated into a non-English language by school district personnel	27
	3...Other locally developed or teacher developed tests	28
	4...Teacher observations	29
	5...Other	30
16c.	(Use of standardized tests). Please indicate all of the areas on which this student was tested with an English language standardized test between September 1975 and July 1978.	
	1...No subjects were tested with an English language standardized test	31
	2...Reading	32
	3...Mathematics	33
	4...Other	34
16d.	Please indicate all the areas on which this student was tested with a non-English language standardized test between September 1975 and July 1978.	
	1...No subjects were tested with a non-English standardized test	35
	2...Reading	36
	3...Mathematics	37
	4...Other	38
16f.	(Student's reading achievement). The basis for the response selected in 16e above was:	
	1...Professional judgment of teacher	39
	2...Professional judgment of another person(s)	40
	3...Results of standardized tests	41
	4...Other	42

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Item Number	Response Alternative	Multiple Answer Variable Number
17a.	Federal Support	
	01...ESEA Title I (excluding Migrant)	43
	02...ESEA Title I (Migrant)	44
	03...ESEA Title VII (Bilingual Education Act)	45
	04...ESAA (Emergency School Aid Act) Title VII of P.L.92-318	46
	05...Education for the Handicapped Act (formerly ESEA Title VI)	47
	06...Indian Education Act	48
	07...Ethnic Heritage Act	49
	08...Vocational Education Act	50
	09...Follow Through	51
	10...Right to Read	52
	11...Head Start	53
	12...Free or reduced price meals	54
	13...Other Federal Programs	55
17c.	State Programs	
	1...State Bilingual Programs	56
	2...Other State Programs	57
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